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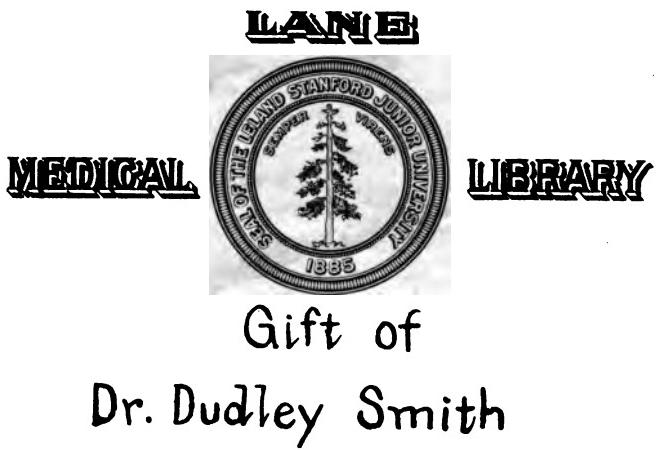
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MATERNITAS

CHARLES E.PADDOCK,M.D.





MATERNITAS

MATERNITAS

A BOOK CONCERNING THE CARE OF THE
PROSPECTIVE MOTHER AND
HER CHILD

BY

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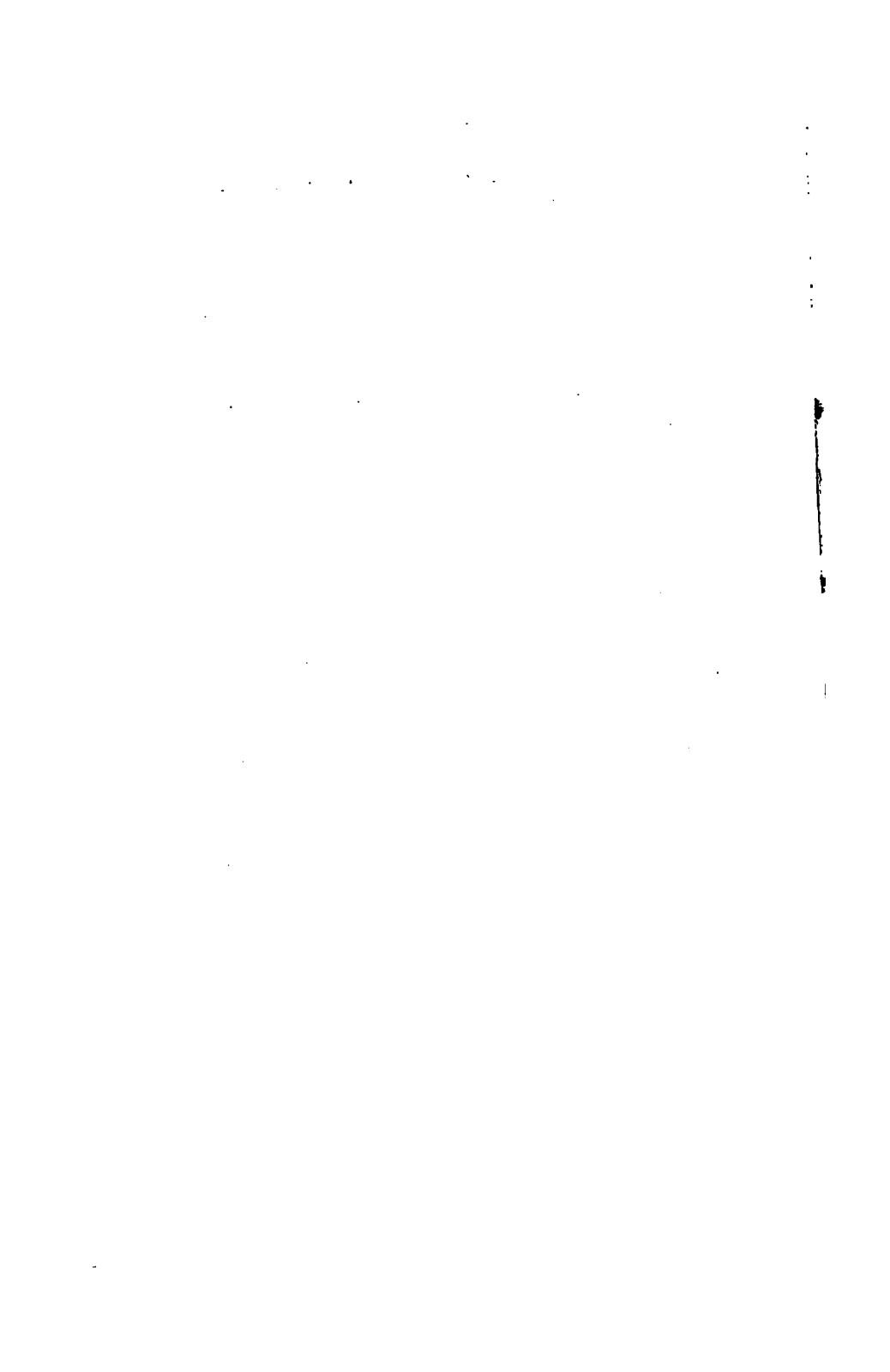
CONTENTS.

	Page.
Introduction	7
PART I.	
THE MOTHER.	
CHAPTER I.	
Preparation for Child Bearing.....	11
CHAPTER II.	
Practical Facts About Pregnancy.....	17
CHAPTER III.	
The Hygiene of Pregnancy.....	21
CHAPTER IV.	
Preparation for Confinement.....	45
CHAPTER V.	
Convalescence from Confinement.....	57
PART II.	
THE BABY.	
CHAPTER VI.	
Development of the Baby.....	71
CHAPTER VII.	
Care of the Baby	83
CHAPTER VIII.	
The Baby's Food	129
CHAPTER IX.	
Diseases and Injuries.....	157
Appendix	177
Index	187

INTRODUCTION.

The aim of the author in presenting this little work is to aid the prospective mother during her pregnancy, and to guide her in those trying days and weeks after the baby has come and the trained nurse has been dismissed. He has endeavored to explain some of the many perplexing questions which present themselves to her at these times, but which she considers hardly necessary to discuss with her physician.

It is hoped that the busy practitioner may find in the book a not unworthy adjunct to his own advice, especially since it is not intended in any sense of the word as a medical guide. The writer has tried, rather, to impress upon the mother who reads it the importance of co-operating with her physician and early consultation with him on all those matters which properly demand his attention.



PART I
THE MOTHER

CHAPTER I.

Preparation for Child-Bearing.

Generations of indiscretions have impaired the female organism to such an extent that most women of today bear the marks of racial enfeeblement. Adult physical defects are, however, by no means all the fault of bygone ages. Perhaps even a more potent factor in their cause is the torpid indifference of many mothers toward the physical and moral welfare of their daughters when the young girl is nearing that period which means so much to her future health and to the development of her reproductive powers.

Even before puberty a girl's physical condition should be thought of in the light of its importance to her future motherhood. Although the organs of generation are the last to develop it must be remembered that these organs will be underdeveloped and unfit for reproduction if physical soundness is not maintained during childhood.

During the period of puberty the utmost care is required to prepare the girl for the heavy demands which nature will make upon her if she becomes a mother. The functions of the reproductive organs require months and sometimes years for their normal, healthy establishment. At this time the girl's future health is at stake. The modern girl too often arrives at the age of puberty unprepared, either physically or mentally, for the great changes to which her nature is to be quickly subjected, and, in consequence of her very unpreparedness, a severe shock to the nervous system results.

It is to the mother that we must look for proper treatment of her daughter at this trying time. There must be confidences on this subject between them, the younger woman must be impressed with the importance of the changes coming over her and taught definitely how to care for herself. The girl should know that puberty is one of the turning points of her life and that upon her obedience to the laws of health at this time depends the physical and mental welfare of succeeding generations. The mother can give the needful advice in delicate but

unmistakable language, and so place herself in a position to be thereafter the trusted adviser in all these matters of which her larger experience should have given valuable knowledge.

Most of our mothers, unfortunately, appear to be ignorant of the necessity for a special hygiene of puberty and menstruation. This is strange in view of the fact that former ages definitely appreciated this necessity of periodical care and that even to-day primitive peoples scrupulously observe such care, both as a common law and as a religious rite. Huts have been found built especially for menstruating women, made so low that it is impossible to do otherwise than lie down in them.

Our best ideas of the care necessary for girls, in order that they may develop the finest physical attributes of their sex, may be summarized as follows: The general condition and ordinary functions of the body should be kept constantly up to the level of normal health. Compression by tight clothes should be prohibited. Corsets and clothing worn tightly have, in many cases, been responsible for underdeveloped breasts

and nipples, with consequent future inability to nurse a baby.

Present-day notions of what ought to be done for the girl at her menstrual period I find usually at one or the other extreme: either she is left free to follow her own inclinations at this period or else she is put to bed by a solicitous mother, with the result that the girl imagines herself ill. Now the wise woman will avoid both these extremes. She will, of course, realize the necessity for rest and care; she will insist on her daughter avoiding dancing, shopping and exposure to inclement weather; and, also, she will see the vital importance of preserving emotional calmness in her girl. This latter will have to be achieved, first, by her own example of emotional quiet and, second, by a reasonable explanation of the phenomena of menstruation.

The main point to remember is that it is the entire woman, mental and physical, who is responsible for the child which she will later bear. The correlation in harmonious action, not only of every organ of the body, but of every cell composing those organs, is a primary requisite for the production of a normal child.

CHAPTER II.

Practical Facts About Pregnancy.

The following signs and symptoms aid the physician in diagnosing pregnancy:

(a) If a married woman in good health and in the reproductive period, after menstruating regularly, ceases to menstruate, there is a strong probability that she is pregnant.

(b) Enlargement of the breasts with tingling in them is not of itself of much value as an indication, but in connection with cessation of menstruation, may furnish valuable evidence of pregnancy.

(c) Morning sickness, with or without vomiting, often gives to the pregnant woman the first indication of her condition. It occurs in greater or less degree in at least one-half of the cases; with the other signs enumerated, it is valuable for making a diagnosis.

(d) Quickening or "feeling life," which usually occurs between the sixteenth and

twentieth weeks, is a certain sign, if the woman has not misinterpreted the sensations.

(e) The discovery of the fetal heart sounds and locating of the child by the physician examining through the abdominal wall is proof absolute that the woman is pregnant.

As a rule, the cessation of menstruation in a young married woman is not due to taking cold, and should not be so considered, neither should she, with that idea in view, do anything to bring on menstruation. Under such circumstances it is always dangerous to interfere with nature.

From the view point of health, to say nothing of that of morals, artificial interruption of pregnancy by whatever means is hazardous. Hospitals are being supported by patients who have become invalids through pelvic disorders, produced by criminal miscarriages.

A woman who marries must expect to become a mother, but in the beginning of her married life she often implores her physician to free her from her maternal burden. To her, the operation seems a simple, harm-

less one, but to those who know, it means that the woman may be left in a condition that will prevent conception in the future, and may render her an invalid.

The habit of preventing conception during the first years of married life by means apparently not harmful to health, often leads to years of regret in later life. Barrenness in the woman is frequently due to the successful attempt made for a prolonged period to prevent conception. The reasons given for the avoidance of childbearing are usually flimsy. The justification and nobloring of wedlock is the birth of children.

As soon as possible after it is known that conception has taken place, a pelvic examination should be made by a physician. This important matter is often delayed through delicacy, but neglect of it might entail very serious results.

The first movements of the child in the womb have been likened to that of a bird fluttering in the closed hands. This sensation frequently causes the young pregnant woman some alarm. It is about the seventeenth or eighteenth week of pregnancy that this movement is usually noticed, although

it may be as early as the twelfth week, or as late as the thirtieth or later. In fact, women have been known to go the full nine months of pregnancy without being conscious of any fetal movement and finally the child be born alive.

The exact date of confinement cannot be given, as we cannot know the time of conception. We can only approximately decide upon the time that pregnancy will cease. Outside influences, such as falls or blows, often determine the date. From reckoning up large numbers of cases we know that the average termination of pregnancy is 280 days from the beginning of the last menstruation. Another method of reckoning which is fairly accurate is to count back three months from the beginning of the last menstruation and add seven days; e. g., Mrs. X. began to menstruate the last time on September third, 1904. Counting back three months and adding seven days will make June 10th, 1905, or adding nine months and seven days will give the same result.

About ten days or two weeks before the beginning of labor the prospective mother will notice that her waist is smaller, that her

clothes are looser there and that the position of the child is not so high. To this settling of the womb we give the term "lightening before labor."

Mistakes are inevitable in computing the length of pregnancy. If there were no other factor, the single reason that the actual date of conception cannot be known, necessarily leads to error. On account of the confusion in the matter, it is sometimes said that the pregnant woman has "run over her time." Such occurrences are certainly possible, but very rare. From a medico-legal standpoint the subject is very interesting and various laws have been passed in different countries to cover the question. In practice the physician will watch an apparently prolonged pregnancy very carefully, and when convinced of its being longer than necessary, will take means to terminate it without harm to either mother or infant.

How sex is primarily determined is a problem as yet unsolved. The ratio of the sexes remains about the same the world over, being about 106 males to 100 females. Neither climate nor food materially alter it. There seems to be some strong proba-

bility in the theory that the determination of the sex of any given individual is dependent on the given ovum from which he or she is developed. The sex of this ovum, in turn, is probably determined long before conception, perhaps even before puberty.

The diagnosis of the sex of the child before birth is an uncertain matter. As a rule, boys are larger than girls at birth, and the heart beats more slowly. Consequently, when the heart beats can be counted before birth, and are found below 140 to the minute, the child may be a boy, while if the beats are above 140 to the minute, it may be a girl. Any decision more definite than this is merely a guess.

CHAPTER III.

The Hygiene of Pregnancy.

A woman who is about to become a mother should have the most careful consideration from her physician. Pregnancy is supposed to be a normal process, but there are few women who are entirely free at this time from some physical complaint. Pregnancy has been defined as "a disease of nine months' duration," and when the changes taking place in the entire female organism are considered, it seems no wonder that it is so interpreted. Every part of the body is affected by the reproductive stimulus. For instance, to supply nourishment to the growing womb and its contents, the heart must do increased work, as it is through the blood that the fetus is supplied with food and oxygen. Then increased heart action is accompanied by an increase in the functions of the kidneys and those organs, in order to perform their work, become necessarily enlarged. Even the glands of the skin

are stimulated and aid the kidneys by eliminating through the openings or pores some of the waste products of the bodies of both mother and fetus. The womb itself does not expand like a balloon, but grows by an increase in the number and size of its muscle fibers. The adult non-pregnant uterus weighs about two ounces, but immediately after delivery, while the emptied womb is contracting, its weight is from two to three pounds.

Much attention is nowadays given to the special hygiene of pregnancy. Physicians have learned from experience that the better care we give the pregnant woman, the easier her labor, the quicker her recovery, and the healthier her offspring. At first the restrictions may be somewhat irritating to the patient, but though she be compelled to deny herself many old pleasures, she may soon find new ones, which more than make up for those lost.

Diet.—There is no reason why the diet should be changed much during pregnancy, providing it has always been wholesome, causing no disturbance of digestion. There may be a desire for a more generous amount,

or there may be a craving for some article of food which was formerly distasteful. In the later months of pregnancy the amount will necessarily have to be increased, but care must be taken not to attempt to satisfy an abnormal appetite. Any craving for certain articles may be satisfied, providing they are harmless.

A simple and substantial dietary comprises meat once a day, vegetables, eggs, cereals, stale bread and plenty of fruit and milk. These contain all the nourishment which is needed by a pregnant woman. Fresh fruits, such as apples, oranges, grapes (with seeds removed), grape fruit, are particularly desirable. Water should be drunk freely every day. Besides milk, cocoa and chocolate are recommended. Tea or coffee may be taken once a day, but a cereal coffee is much better than either. Pastries, cake and candy should be avoided.

The heavy meal should be at noon, the supper a light affair, consisting of milk, cereals, toast, custard or ice cream. There is great danger of over-eating, and it is much better to leave the table hungry than with an overloaded stomach.

Frequently the pregnant woman has a sensation which she will describe as "a goneness in the stomach." This is a feeling of emptiness of the stomach, and it may be accompanied by faintness. At such a time a glass of milk drunk slowly or a crust of bread will suffice to correct this disagreeable sensation.

The evil effect on the offspring of the immoderate use of alcoholic beverages is too well known to need discussion.

Over-eating and errors of diet often result in unduly increasing the size of the child before birth. The amount of fat in the abdominal wall and in the pelvis of the mother is increased and thereby the progress of labor is hindered. A special diet is sometimes ordered in cases where, in previous pregnancies, the child had been abnormally large. It is only in exceptional cases, however, that such a diet will be needed, provided the above advice given regarding diet is religiously followed. Of course the physician will modify the diet to suit the special case.

Clothing.—A desire to conceal her condition and preserve her figure sometimes

causes the pregnant woman to continue wearing her corset almost to the last, and it may be difficult to convince her against her will that she is doing both herself and the babe a real injury.

Tight-lacing interferes with the growth and development of the child, produces mal-positions of the womb, and often interrupts gestation. No woman who has any regard for her children's health, to say nothing of her own, will resort to the practice of tight-lacing at this or at any other time.

That the corset is the cause of floating kidneys and a general prolapse of the abdominal organs is a well recognized fact, and constipation, indigestion, gall-stones, headache are but a few of the ailments which can be directly attributed to the wearing of such a garment.

At present the corset shown in Fig. 1 is the most popular one and really has many good qualities. Instead of crowding the abdominal contents downward it rather lifts or supports them. This style of corset also leaves the breasts free, only supporting them from below without making any compression.



Figure 1.

The author would recommend this corset to the non-pregnant woman who prefers such a garment to one of the reform waists, the latter being, however, much better and healthier than the corset.

Fashion will soon decree that this low fitting corset must give way to another and probably one that will not be an improvement either as far as comfort or health are concerned.

The corset frequently worn by the non-pregnant woman, and sometimes continued as a garment in pregnancy, is the imperfectly fitted corset shown in Fig. 2. Because of its use, the contents of the lower abdomen are crowded downward and backward, the womb is displaced, the function of the liver is interfered with and permanent injury to that and other abdominal organs results.

As soon as the fact of pregnancy has been ascertained, the corset, if worn, must be discarded for either one of the dress reform waists, such as the Ferris, Jenness-Miller, or Equipoise waists, or for a maternity corset, which permits no constriction and yet offers support to the growing womb. The



Figure 2.

corset or waist is hung from the shoulders, and to it the skirts may be attached. The skirts must either have straps which pass over the shoulders or be attached as mentioned, the idea being to take all weight from the abdomen.

Wool should be worn next to the skin, the weight to correspond with the season.

In certain cases where the abdomen is quite pendulous and heavy, an abdominal

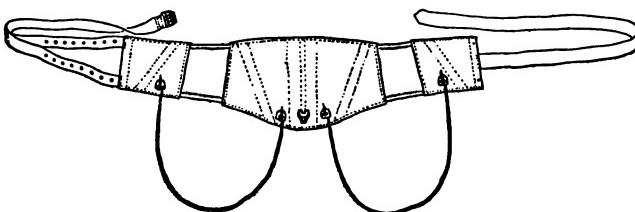


Figure 3.

supporter will often furnish marked relief. (Fig. 3). This can be worn underneath the waist. Especially is this serviceable for women who have had one or more children.

Low-heeled shoes must be worn. High heels cause much of the backache from which women suffer, especially during pregnancy.

Constrictions about the body anywhere

must be removed, as the circulation is impeded by them. Even the band garter must be replaced by side elastics.

The Bowels.—Since, as a rule, women suffer considerably from constipation, it is hardly to be expected that they overcome the habit during pregnancy, unless by following a strict regimen directed against that tendency. The usual causes of constipation in women are improper diet, lack of exercise and constriction of the abdomen by clothing. Following the general rules of hygiene in pregnancy, as prescribed in these pages, will sometimes cause the bowels to act more readily. The following suggestions are made for those chronically constipated:

Evacuate the bowels at a regular time every day. There should be no straining. If the effort is not successful, a glycerin suppository or a low enema of water may be used. However, the habit of taking enemata is to be avoided.

In addition to the diet mentioned, it is well to take cracked wheat, oat-meal, farina, graham and rye bread or biscuit. New bread or hot biscuit should not be eaten. The strong craving for fruit, which frequently exists,

may be thoroughly satisfied, provided that no digestive disturbance arises therefrom. Apples, oranges and grapes without seeds are the best. The seed fruits, strawberries, blackberries, etc., are not considered suitable in cases of constipation, and bananas should not be eaten because of their constipating effect. Some patients may not be able to properly digest fresh raw fruit, but can well take care of stewed or cooked fruits, particularly baked apples. Canned or preserved fruits are not suitable, because of the large amount of sugar they contain.

Upon getting up in the morning drink a glass of cool water and eat an orange or an apple. This may also be done at bedtime.

Drink plenty of water between meals.

Masticate thoroughly all food. Even milk should not be swallowed till thoroughly mixed with saliva.

If, in spite of all these precautions, constipation persists, resort must be had to drugs. Cascara Evacuant in doses of fifteen drops, three times a day, or one-half to one teaspoonful at bedtime usually is effective. It can be alternated with Apollinaris water or Tarrant's Seltzer Aperient.

Morning Sickness.—In the minds of many women the morning sick stomach is inseparably connected with pregnancy. As a matter of fact, however, this experience does not always accompany pregnancy, although in the majority of cases there is more or less of it. The nausea is usually experienced in the early morning, or as soon as the patient arises from bed. If it be mild and lasts only a few minutes, there is usually no necessity for treatment, but if it continues, or occurs several times a day, with the loss or refusal of meals, the physician should be notified.

Heart-Burn.—Acid eructations frequently occur accompanied by a sensation of burning, extending from the throat to the stomach. Accompanying pain may be severe, passing through to the back. Often there will be considerable tenderness over the stomach. These conditions are frequently due to some error of diet or to constipation. For immediate relief, one-half teaspoonful of bicarbonate of soda, with at least half a glass of water, may be taken, or one of the effervescent alkaline mineral waters drunk after or during the meal. Calcined magnesia is

also useful. A continuation of this condition should lead the patient to consult her physician.

Exercise.—A certain amount of exercise is necessary, but the woman who has never taken any, cannot expect to make an athlete of herself at this time. She should refrain from exercise that is too fatiguing. On account of the increased amount of work which, as we have already stated, the heart is called on to do, care must be taken not to overtax that organ by any indiscretion. Injury might thus be done both to the mother and her developing baby. Walking is beneficial and should be a daily habit, but must not be carried to the point of fatigue. Driving in an easy carriage over smooth roads is permissible. Long railroad journeys or long automobile trips over rough roads are dangerous. Straining in any way, by lifting or otherwise, bicycling, horseback riding, climbing stairs rapidly or several times a day, and sewing on a machine should be avoided. Swimming, dancing, running, tennis or golf are not allowable.

General massage should be taken by those unable to exercise in other ways. The mas-

seuse must avoid the abdomen and the breasts.

Keep out of crowds. In daily outings, go towards the parks rather than to down-town streets and shops. An occasional evening at the theatre is a diversion and is harmless, provided the play does not excite undue emotion and is not given in a crowded, poorly ventilated building.

Fresh Air.—All rooms occupied by pregnant patients should be well ventilated and have plenty of sunlight. Beyond the usual raising of windows, an open fireplace affords the best ventilation.

The Bath.—The bath is of great importance during pregnancy. Since the activity of the skin is increased, it needs more attention in order to maintain its function as an excreting organ. The temperature of the bath should be agreeable to the skin, neither too hot nor too cold, somewhere about 90° F. Cold showers, surf baths, sitz baths, or very hot baths are not to be taken; any of them might terminate pregnancy. The bath, by keeping the skin in a healthy condition, relieves the kidneys of much work and also aids digestion.

The bath is generally taken in the morning, either before breakfast or midway between breakfast and lunch. It should never be taken within two hours after a full meal. A warm bath may be taken at night if the patient is restless. It will secure repose and sleep.

The Kidneys. — Much regarding the health of a patient can be ascertained by a careful examination of the urine; therefore, every two weeks during pregnancy three or four ounces of urine should be sent to the physician in a clean bottle, properly labeled. A twenty-four hour specimen should be analyzed occasionally, and is obtained as follows: At seven o'clock, or at a stated time in the morning, the bladder is completely emptied and the urine thrown away. From this time on all urine that is voided, together with that passed at seven the next morning, is saved in one vessel; the total amount is measured, and a sample of three or four ounces taken from this mixed quantity. The sample is then sent to the physician, marked as follows:

For Dr. -----

From Mrs. -----

Twenty-four hour specimen. Total---ounces.

That these samples should be sent to the physician is imperative. His other duties often prevent him from asking them, and therefore every mother must take upon herself the responsibility of following up this matter.

Irritability of the Bladder.—By pressure the growing womb often causes disturbance in the functions of the bladder, the patient having to urinate with annoying frequency. There are two periods when this is most likely to occur: either in the third or fourth month of pregnancy, or in the last week or two before confinement. There is not much that can be done to relieve this symptom. Resting on the bed in the knee-chest position, that is, kneeling with the hips as high as possible, and the chest, shoulders and head close down on the bed, remaining there for a few minutes at a time, will often give temporary relief. In the latter weeks wearing the abdominal supporter will remove some pressure from the bladder, and thus relieve the irritability.

Hemorrhoids. — Hemorrhoids are fre-

quently quite annoying and appear in the last weeks of pregnancy. If due to constipation, a frequent cause, a correction of this will suffice. For immediate relief from pain the application of hot fomentations or witch hazel compresses, is often sufficient. Whatever the cause, a physician should be consulted.

The Douche.—Many women believe that during pregnancy the vaginal douche should be taken as a daily or weekly practice. That this douche often does more harm than good is apparent to physicians; much of the pelvic distress from which women suffer being due to its too frequent use. It is impossible to insert the douche point as ordinarily done without carrying infective material into the vagina. After all, there is no good reason for the use of the vaginal douche during pregnancy, unless there be an acrid and irritating discharge. In that case treatment under the direction of a physician is necessary.

The Breasts.—During pregnancy the surface of the breast should be washed daily, either with a liquid soap or castile soap and warm water, then rinsed in cold water, and

the last two months the nipples anointed with cocoa-butter. Alcohol, which is so generally used, is an irritant. Sometimes a lotion, instead of the cocoa-butter, may better be used for a short time, the formula being:

Glycerite of tannin, half an ounce;

Compound spirit of lavender, half an ounce;

Water, three ounces.

If the nipples are flat, a gentle attempt should be made daily to draw them out.

If the breasts are large and heavy during pregnancy, some form of supporter should be used. (Fig. 4.)

A month or two after the beginning of pregnancy, the breasts begin to enlarge, usually slowly, but sometimes the change is quite rapid. This enlargement is accompanied by a tingling or slightly painful sensation. Also about this time the skin around the nipple becomes quite dark, forming a ring or areola, one to one and one-half inches in diameter. Later, due to the stretching of the skin, there may appear on the outer surface of the breasts shiny lines or "striae," especially on the lower and under side of the breast. Attention is called to this fact,



Figure 4. India Gauze Bodice Used as a Breast Support. (Edgar.)

because of the alarm it sometimes causes the patient, and because the physician is sometimes blamed because of these marks. They are harmless and cannot, as far as known, be prevented. The presence of these variations from the normal breast is strongly suggestive of pregnancy, especially in a woman who has never borne children.

Care of the Teeth.—The rapid decay of teeth which sometimes occurs during pregnancy is probably caused by acid eructations, the result of characteristic increase in stomach acidity during the first months. The fact that the mother must furnish the mineral matter necessary to form the tissues for the child may also partially account for such decay.

A dentist should be consulted frequently, and the cavities temporarily treated; severe and painful dental work being avoided. The writer knows of nothing so efficacious in arresting this decay of the teeth as milk of magnesia, lime water or a solution of bicarbonate of soda, a teaspoonful of the soda to a glass of water. One of these should be used as a mouth wash after each meal and at

bed time, the remedial substance being thoroughly forced between the teeth.

In some cases the saliva becomes markedly increased during pregnancy, the hypersecretion being often quite annoying. This is not a severe complication, usually being due to some error in diet, which should be corrected.

Swellings.—Enlarged veins which show upon the surface are common in pregnancy. They are usually found upon the legs and occur as a rule in women who have not taken the best care of themselves. These varicose veins often occasion a good deal of pain, itching and burning. The preventive treatment is the early abandonment of the corset, of tight waistbands and of circular garters. The active treatment is rest with the feet elevated, and skilful bandaging. Under no circumstances should a vein be punctured with a pin or needle.

Edema or swelling of any part of the body must be reported to the physician. While this symptom may mean nothing, it usually calls for treatment. Sometimes a pregnant woman says to her physician: "My feet are so swollen I had to put on my husband's

slippers." This is a significant fact, and generally under the circumstances she should be in bed and under careful treatment. A few days of rest and diet will usually suffice to correct the condition.

The pressure of the growing womb sometimes causes stagnation of the venous circulation which in turn produces a generalized swelling of the lower limbs. Occasional rest in bed will relieve this trouble.

Mental Conditions.—For some unknown reason, the laity have the idea that unborn children can be marked by the psychic impressions of their mothers, and that occasionally they are so marked. Some accident which the woman has witnessed during pregnancy, some deformed, or ugly person or some strange animal which has happened to cross her path has, they say, been photographed and may be reproduced in the unborn child. A little reflection shows how absurd this belief is. If the theory were true, nearly every child, since nearly every prospective mother has seen strange sights, would be deformed.

The sooner this subject is dismissed from the mind, the better, for there is nothing

upon which we can scientifically base such a belief.

Keeping one's self, however, in a happy frame of mind, reading good books, enjoying beautiful music and pictures, all tend to affect mind and body favorably, and to a certain extent indirectly have a healthful influence upon the child.

As regards heredity, maternal influence is of more importance than paternal. Education, morality, temperance, health in the mother, are apt to be manifested in the child. This being the case, the mother should not wait until the beginning of pregnancy to cultivate her physical and mental qualities; her culture for childbearing must come through previous years of training.

The pregnant woman seems to be the prey of the gossip mongers, of women who feel it their duty to pour into her ears all that is unpleasantly connected with childbirth. The tattle of such persons should be strictly avoided. They are unfortunate women who have not the fine sense of feeling which is expected of the gentler sex, and who masquerade as friends, but are ever ready to make the life of the pregnant woman miser-

able. The fact that from the beginning of the human race women have successfully given birth to children should encourage the expectant mother in the belief that she can do the same.

CHAPTER IV.

Preparation for Confinement.

Cleanliness — Asepsis. — The value of surgical cleanliness to both mother and child during the whole puerperal period is so great that it well justifies the old saying, "Cleanliness is next to godliness." Indeed, the main object of the physician throughout the entire case is the carrying out of that degree of asepsis or surgical cleanliness which will keep the mother free from disease and give the child every chance to develop robust health.

It seems strange to many people that such radical change from the conduct of confinement in bygone ages are now deemed advisable. As a matter of fact surgical cleanliness was just as necessary in the pre-microbic days of our grandmothers as it is now. In those times childbirth fever was the rule rather than the exception. Now, thanks to our knowledge of bacterial infection, this disease is rare.

It was not the author's intention to mention anything which would lead the expectant mother to think any harm could come to her at the birth of her baby, but he feels that he must answer the criticisms of those who consider surgical cleanliness unnecessary. Statistics will show why all of this "fuss and feathers" is requisite. Because the mother of long ago successfully passed through her confinement is indeed a mystery when the dangers are considered, but she was fortunate. One pregnant woman out of every twelve died from causes incident to child-birth, and of those who survived, invalids were many. During the past ten years there have been over seven hundred births at the Chicago Charity Hospital without a death. This should be a fitting reply to those who criticise such methods.

We find, practically, that sterilization of all the articles which come in contact with the patient destroys the micro-organisms which cause childbed fever, but, then, unless the nurse and physician thoroughly cleanse their hands and wash them in some antiseptic solution, the sterilized articles, such as sheets, towels, etc., become contaminated.

The water as it comes from the tap contains germs, so we boil the water that is to be used in the case to destroy them. They could be destroyed by antiseptic solutions, such as carbolic acid, bichloride of mercury, etc.; but it would be necessary to make these solutions too strong for practical purposes.

Articles Sterilized.—To assist in car-

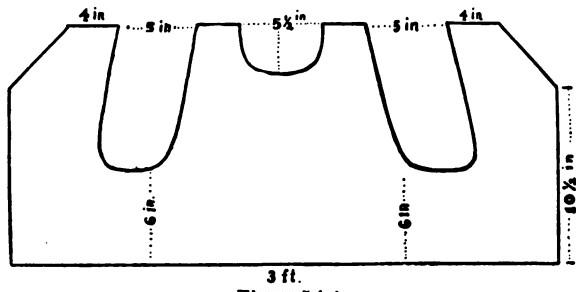


Figure 5 (a).

rying out this idea of cleanliness, the trained nurse, some weeks before the date set for confinement, calls at the house of the patient and sterilizes the following articles: Two dozen towels, half a dozen sheets, half a dozen pillow cases, three night dresses, two pair long hose, three abdominal binders made of unbleached muslin, sixteen inches wide and thirty-six inches long; three breast binders (See Fig. 5), thirty yards bleached



Figure 5 (b). Breast supporter for nursing mother.

dairy or fine cheese cloth, four T-bandages or menstrual pad holders, two gowns for physician.

At this time she should prepare three or four obstetric pads of cotton and dairy cloth, one yard square, quilted or tacked; also two or three dozen menstrual pads or hygienic napkins made of gauze and cotton, and long enough to be fastened to the binder before and behind.

Physician's List of Articles.—She will also see that the physician's list has been furnished and is ready. It is as follows:

- 3 quart fountain syringe.
- 2 yards rubber sheeting.
- 3 enamel or granite hand basins (medium size.)
- 2 enamel or granite two-quart pitchers.
- 1 perfection bed pan.
- 3 hand brushes (wooden back.)
- 2 pounds absorbent cotton.
- 5 yard jar borated gauze.
- 4 ounces boric-acid crystals.
- 100 bichloride of mercury tablets.
- 4 ounces lysol.
- 4 ounces olive oil.
- 30 yards bleached dairy or cheese cloth.

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- 1 ounce fluid extract of ergot.
- 3 ounces chloroform.
- 6 ounces green soap.
- Obstetric tape for cord.
- 2 drachms nitrate of silver 2 per cent.
- 1 nail file.
- 1 bath thermometer.
- 1 breast pump.
- 1 baby bath tub.
- 1 baby syringe.
- 1 glass nipple shield.
- 3 two-quart fruit jars.
- 1 pair baby scales.

Many cannot afford to purchase all these articles, and the list may be modified. The physician, however, would rather dispense with the entire list than not have the articles about the bed thoroughly clean.

Frequently all preparations for the confinement must be made either by the patient or some member of the household. In such a case the following instructions will be found useful: Take a few old sheets and towels, old linen, or cheese cloth, wrapping each in a separate cover and then in a newspaper. At the same time, prepare the bed-pads, a yard square, quilted or tacked, as

before stated, wrapping these as you have the other articles. The packages are now put into the oven and baked until the paper becomes quite brown. These articles should then be put away, not to be opened until the physician arrives. Instead of the rubber sheet, a rubber oil cloth will answer the purpose. Boil the necessary basins and pitchers for one-half hour in some large receptacle, as a wash boiler, and put them away. Thoroughly clean and ventilate the room to be used for the confinement, and remove old carpets, rugs and hangings. Any old cotton or linen which has been left from a previous confinement or sent in by the neighbors must be subjected to heat in the oven. When all the above preparations have been made, the case can be scientifically conducted with the additional advice which the physician will give at the time of the confinement.

The Nurse.—For the carrying out of the best ideas in the practice of obstetrics, particularly those of surgical cleanliness, the trained nurse is a necessity. The physician should select the nurse. An obstetric nurse must have skill much beyond that required

for ordinary nursing. She must not only be a capable surgical and medical nurse, but she must be able to care for the babe as well.

The nurse should be engaged early, and a date set for her to come, otherwise she may be called to another case. When engaged to come at a certain time, the pay commences from that date, whether she be with the patient or not. Sometimes a patient is better satisfied to know that the nurse is within easy call, than to have her waiting in the house.

As a rule, the trained nurse is an educated, refined woman. She should be treated as one of the family and not made uncomfortable by forced seclusion. That she is human is a fact too often forgotten. She cannot work night and day without sleep and rest. To give the best she has in nursing skill she must have her rest and sleep, as well as a daily outing of at least an hour. She is expected to be at all times immaculate in her costume, therefore she is obliged to wear washable gowns and aprons, which require frequent changes. It is evident, then, that her laundry should be done at the house where she is nursing.

The Patient's Mother.—What position shall the physician take regarding the presence of the mother of the patient at the accouchement of her daughter? Naturally she wishes to be there, but so frequently does she allow her sympathies to interfere with her usual good judgment, that in a large majority of the cases it is better for all concerned that she remain away.

The Lying-in Room.—When the nurse calls to do the sterilizing, the room for the confinement should be selected. This must be one with plenty of sunlight and fresh air, in a very quiet part of the house, on the same floor with the bath room, and should connect with other rooms for the baby and nurse. It should contain an open fireplace, which always gives good ventilation and in which a fire can be had during cool weather. There should not be a stationary wash stand in this room.

All draperies at the windows and about the bed should be removed and the carpet taken up. The furniture should be as simple and plain as possible, such as can be washed.

The room should be thoroughly cleaned

and aired, and if possible, fumigated, especially if there has been any recent illness in the room. All the bedding must be cleaned and fumigated, including the mattress. A single bed is better than a double one.

The Show.—This is a term given to a discharge which often comes on a day or two before labor and which consists of a thick mucus, more or less stained with blood. This discharge indicates that the lower part of the womb is dilating.

The bag of waters may rupture before the beginning of labor; if it does there is no reason to be alarmed. Go to bed and send for your physician.

Labor Pains.—During pregnancy the uterus alternately contracts and relaxes, becoming hard and soft at shorter or longer intervals. A woman is made aware of this by the abdomen feeling hard and seeming to rise up higher, then it becomes softer and settles down again. When labor begins the same condition will be felt, but with each contraction there will be a little pain radiating around to the back. Usually these pains or contractions are far apart, perhaps one

PREPARATION FOR CONFINEMENT. 55

hour, or a half an hour, and as time goes on, the intervals shorten. The pains are usually felt in the back, then as the intervals grow shorter, they move more to the front. When there have been two or more such contractions with pain, the physician should be notified and the nurse sent for.



CHAPTER V

Convalescence from Confinement.

Following the birth of the baby there is a period of a few days when the mother is absolutely in the care of her nurse, and, therefore, it is not necessary here to give any directions to the mother. The nurse is the representative of the physician at this time, and will carry out his instructions. Her ideas may not correspond with those of the family or friends, but it should be remembered that this is not her first case and that she is obeying instructions. She is supposed to be an experienced person, who should not allow interference. This period may be made very irritating to the patient and embarrassing to the nurse by outside interferences. In most cases when differences arise between the nurse and the family, the fault is with the inexperienced family.

Company.—The nurse must refuse to admit anyone to the sick room, except immediate members of the family. As conva-

lescence advances there is no reason why a friend or two may not then be admitted. The nurse must be the judge as to whom the visitors may be, and as to the length of the visit. Most women want rest at this time and company tires them, but a happy, cheerful friend will often act as a tonic. Time passes rapidly between the care of the mother and of the babe. First, there is the toilet of the mother; then that of the baby; then the forenoon lunch and the nap. At two hour intervals comes the nursing of the baby. There is not much time for company. Other reasons why friends should not be admitted are that they often make the patient nervous, and that they may carry infection.

Rest and Exercise. — When we stop to consider what the mother has gone through during the past nine or ten months, it is difficult to understand how any sane person can argue that a convalescence involving a certain number of days in bed is unnecessary. In the best interests of the patient, both mental and physical rest is demanded.

After the first week, and while still in bed, a little exercise in the shape of general

massage should be given every day. A few exercises with the arms and legs, together with deep inspirations, are very beneficial and can be taught the patient by the nurse.

Getting Up.—The time for getting up depends upon circumstances. There are some whose recovery is so rapid that they are able to get out of bed in one week, while others require two, three or even four weeks of rest. Much depends upon the character of the confinement and the recuperative powers of the woman, and also upon the character of the lochia. When the lochia (the flow from the womb) has gone through the characteristic changes and is no longer red, but white and scanty, the womb is considered to be in an advanced stage of involution and the mother is advised to sit up, provided she is in a healthy condition otherwise.

It was formerly the custom to order the patient to sit up on the tenth day regardless of her condition, but experience proves that two weeks is the average length of time which the patient should remain in bed after the birth of her child. On the day set the mother is allowed to sit up for one-half hour in the morning, and if this does not

fatigue her, she may sit up again for the same length of time toward evening. The next day, the time is lengthened probably one-half hour, and so on from day to day, and at the end of three weeks she can be taken down stairs. At the end of four weeks, if the weather is favorable, a short ride is allowed. Should the flow recommence, the woman is immediately put in bed, to remain until it has ceased.

From now on the recovery should be rapid. Unfortunately, however, many mothers are compelled to take up, with the additional care of a baby, their household duties where they left them, two, three or four weeks ago. A few are able to thrive under this, but the majority are not, and its result is manifested by backache, lassitude, diminished milk supply and frequently a general breakdown.

The new mother should be free from care and worry, be able to take regular outdoor exercise and obtain as much uninterrupted sleep at night as possible. Fresh air is as necessary to the mother as to the baby. The outings should be in the parks and not in the crowded, poorly ventilated stores.

The question is often asked by the woman as she begins to be around the room, "When may I put on my corset?" Not for six weeks at least and then it should be loose and of the pattern shown in Fig. 1.

After-Pains.—Some women suffer more or less from painful contractions of the uterus following the birth of the baby. These pains rarely last longer than a few hours and are usually a good sign, indicating the firm contraction of the womb and an early return to its proper size and position. When the infant is put to the breast, these pains are often increased for the moment.

Diet.—It was formerly customary after the birth of the child to keep the mother upon a skim milk and water diet. This treatment is now obsolete and the patient is dieted as any one would be in bed, not taking exercise. She should be given nourishment according to her power of digestion.

There should be the usual three meals a day, and between these and at bed-time a glass of milk or gruel should be given. For the first day or two the diet should be somewhat lighter than on subsequent days; it can be selected from the following list:

Diet for First Two Days.—Milk, hot or cold, one to two quarts a day; gruel; soup; clam broth; beef tea; beef juice; cereals; soft boiled eggs; toast and eggs; cocoa or tea.

Diet for Third Day.—Milk; milk toast; poached eggs; soups thickened with rice or barley; cereal foods; wine jelly; stale bread and butter; lamb chop; stewed fruits; cup of tea or chocolate.

Diet for Fourth Day.—The same with addition of white of fowl; squab; oysters, raw or stewed; baked or mashed potatoes; ice cream and ices.

Diet for Fifth Day.—Same as above, with, perhaps, steak once a day; eggs; fresh fish; mashed potatoes.

From now until the mother gets up, a sufficient diet can be selected from the list of sample meals. Instead of milk between meals, a cup of chocolate or cocoa, with a wafer, may be substituted frequently. It may be necessary to withdraw some of the fluids for a few days, because of too much milk in the breasts. Oranges, lemons, strawberries, grape fruit, plums and tomatoes can be added to the diet from time to time.

Tea does not produce a flow of milk. In

fact, it has a tendency to retard the flow. It should be taken sparingly, if at all, by the nursing mother.

The convalescent should refrain from such foods as may have disagreed with her before. The following should not be eaten: Fresh pork, canned beef, sausage, veal, turnips, cabbage, canned peas, beans and corn, cucumbers, vinegars, highly spiced dishes, French or mayonnaise dressing, gravies, spiced sauces, heavy pastries and hot breads.

Sample meals' for use after fifth day:
Breakfasts—

- (1) Any breakfast cereal, soft egg, tea.
- (2) Orange, cereal and cream, scrambled egg, tea or cocoa.
- (3) Cereal, broiled whitefish, bread and butter, tea, coffee or cocoa.
- (4) Lamb chop, stewed potatoes, toast, tea, coffee or cocoa.
- (5) Orange, scrambled or dropped egg, minced chicken, graham bread, coffee.

Dinners—

- (1) Broiled or roast chicken, sweet potato, baked cup custard.

(1) Taken from Edgar's "Practice of Obstetrics."

- (2) Roast lamb, mashed potatoes, macaroni, wine jelly.
- (3) Roast beef, celery, mashed potatoes, rice pudding.
- (4) Simple soup, chicken, stewed potatoes, baked cup custard.
- (5) Raw oysters with any of the above.

Suppers—

- (1) Creamed chicken on toast, milk or cocoa.
- (2) Oyster stew, bread and butter, cocoa.
- (3) Minced chicken on toast, baked apples and cream, tea.
- (4) Dropped eggs on toast, graham bread and butter, cocoa or tea.
- (5) Raw oysters with any of above.

The Bowels.—The bowels should be moved on the morning of the second day following labor. The nurse will have instructions what to give for the purpose. One ounce of castor oil is the usual cathartic, but if the patient seriously objects to this, she may be given a bottle of effervescent solution of citrate of magnesia. Castor oil, however, can be given in a variety of ways, so

that it will not be unpleasant. (See appendix.) Each morning afterwards a saline enema is given, and if this is not effectual, one teaspoonful of cascara evacuant should be taken every night, or one-half teaspoonful three times a day.

Suggestions to Lay Nurse.—Frequently the mother has to depend upon some member of the family or upon an inexperienced nurse to care for her and the baby, and while this book is not intended as a guide for nurses, still a few suggestions to this person may be made.

After the baby has come, make the mother comfortable and clean. Put on the binder and a clean pad over the vulva. Change these pads every hour or two. Fresh pads can be made from time to time and baked in the oven. Do not let them accumulate, but destroy immediately after use by burning. Several times a day put the patient upon the douche pan and irrigate the external parts with the antiseptic solution prescribed by the physician in charge. Never use wash cloths or soiled linen to cleanse these parts. Boil the entire syringe, and keep it in a clean towel. Al-

ways, before changing the pad, wash your hands thoroughly with soap and water, clean your nails, and scrub in some antiseptic solution. Always have the linen about the bed scrupulously clean.

Within two or three hours after the birth of the baby the abdominal binder is applied. It furnishes support to the relaxed abdominal tissues and gives much comfort to the mother. The binder is worn until the mother is up and about. After this, especially in women who have had several children, or in corpulent women, a supporter, as shown in Fig. 3, should be worn.

The breast binder is usually put on during the first twenty-four hours. It is kept loose at first, and as the breasts become filled with milk the binder is drawn a little tighter to prevent them from filling too rapidly, being useful also as a support. At the same time, a clean piece of linen or gauze is kept in place over the nipples by this binder. Two patterns are shown, either of which can be recommended.

On the second day give the patient a dose of castor oil.

Wash the nipples before and after each

CONVALESCENCE FROM CONFINEMENT. 67

nursing with a boric acid solution, which should be kept especially for that purpose.

The first cleansing of the baby is with lard, olive oil or vaseline. The end of the cord is now washed with alcohol and the whole wrapped in sterilized gauze; turning the cord toward the head of the child, it is held in this position by the binder, which should not be too tight. This dressing must be kept dry. The eyes are washed with a boric acid solution. (See appendix.) The face, head and hands should be washed with castile soap and warm water daily, but the rest of the body should be only oiled until the cord has dropped off. Great care should be taken to keep soap out of the baby's eyes. Put the infant to the breast every four hours for the first two days, then every two hours during the daytime and every four hours at night. Always awaken the child if asleep at the time for nursing. The infant's mouth should be washed before and after nursing with a solution of borax or boric acid. Troublesome symptoms are not likely to appear if the nurse follows these directions, modified to conform to the wishes of the physician in charge. Remember that

regularity and cleanliness are the principal requirements in the care of both the mother and the infant.

PART II
THE BABY

CHAPTER VI.

Development of the Baby.

The new-born baby is helpless and unconscious of its surroundings. It will open its eyes and cry; it urinates and its bowels move. Put to the breast it will nurse; placed upon the bed, it is unable to change its position. Noise does not disturb it, odors it does not detect. It cannot distinguish objects, and will not wink when the finger is put close to the eye. There is probably not any distinct voluntary action; all its senses are practically dormant. The young infant sheds no tears, and though it may cry and the eyes may become moist, it is not until the age of three or four months that tears actually overflow the lids. At the age of six weeks, the baby begins to fix its eyes upon objects, and at the end of two months, vision is complete.

When about three months old it makes efforts to grasp objects and at the end of six months it will amuse itself with toys. After

three or four months the baby can hold up its head, but does not sit up unsupported until it is about six months old.

Infants seem to be deaf for the first twenty-four hours after birth, and some authors contend that they are deaf for several days. At the age of from two to three months a child will turn its head in the direction from which a sound comes. The voices of the nurse and parents are recognized at three and a half months.

Taste is developed usually at birth—the infant will take sweets and make wry faces at bitter substances.

The normal temperature of a baby is from 98½ to 99 degrees Fahrenheit in the rectum. The thermometer should usually be left in the rectum about three minutes. Often the baby will have a temperature of from 100 to 102 degrees, or even as high as 103, without alarming symptoms; in such cases, however, the advice of the physician should be sought.

In the hands of an intelligent mother the clinical thermometer is a very useful instrument, but the mother who loses her self-possession and becomes excited if the baby

shows an elevated temperature is not the proper person to use it. The record of the thermometer is a valuable guide to the physician when talking with the mother through the telephone.

Before inserting the thermometer in the rectum, lubricate the end with vaseline and see that it has been shaken down to register below normal.

The respirations of a child when awake are irregular. It may hold its breath for a short time and then immediately afterward breathe without any apparent effort. For the first three weeks the average number of respirations is about forty per minute, and during the remainder of the first year the average is about thirty. From one to two years twenty-eight is the average. The respiration rate is somewhat less when the healthy child is asleep.

The pulse is influenced the same as in an adult, by crying, excitement and exercise. At birth the pulse beats range from 130 to 150 per minute. During the first month they vary from 120 to 140; from the first to the sixth month they are about 130; and

from the sixth month to the twelfth month they are 120 per minute.

Usually babies are born with but little hair, although some have a very thick growth. As a rule, the first hair begins to fall out after a week or ten days and the new hair appears, often of the same color, but lighter in shade than it will be later.

If the white, sebaceous substance which covers most babies at birth is carefully removed by the oil the scalp will remain clean and healthy. Should crusts form upon the scalp do not attempt to remove them by the use of a comb. Keeping the scalp well oiled with vaseline will aid the removal of the crusts.

While babies are usually born with little hair, there is a steady growth when the new hair appears. An absence of such a growth after several months may mean that the baby is suffering from malnutrition. To such a condition the physician's attention should be attracted.

After birth the head is usually out of shape, and is not formed as it will be later on. This is frequently a great source of anxiety to the mother, but she can be as-

sured that in a few days what appeared a deformity will have been corrected by a natural process. This seeming deformity is due to a wise provision of nature which allows the bones to overlap during birth,

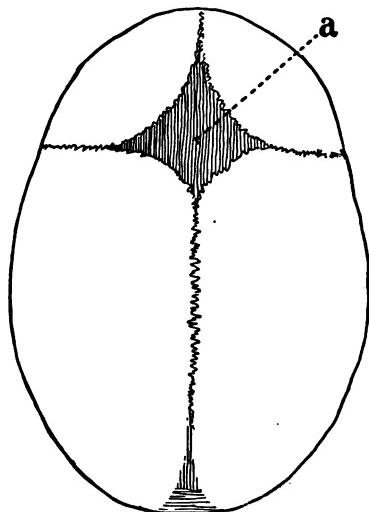


Figure 6.

diminishing for the time being the size of the head, and thus lessening the danger of birth.

Fig. 6 shows the "soft spot" and sutures of a baby's head. As stated, these sutures and the soft spot permit of the bones over-

lapping during labor. The sutures close during the early months and become solid. The "soft spot" gradually diminishes in size, and when the baby is fifteen months old it is usually entirely closed.

The average baby weighs seven and a half pounds at birth. It is very unusual to see one weighing as much as the traditional ten pounds. The great weight of a baby is nothing to boast of. The heavy new-born baby is not likely to gain proportionately in weight nor be healthier than the seven pound baby.

The baby should be weighed by the physician or nurse as soon as possible after birth, and regularly afterwards each week at a certain hour, either just before or after a feeding. Sunday morning may be the time chosen, and as the father is usually at home then, let the weighing of the baby be his duty.

The weight and the date are to be written preferably in a record book which can be seen as necessary by the physician. If the infant is weighed with a certain amount of clothing, a duplicate amount of clothes can be weighed and deducted from the

reading of the scales. The most popular scale is the one shown in Fig. 7.

The baby loses weight during the first few days, regains it by the tenth day, and should gain about one ounce a day during the last three weeks of the first month. In the second month it gains about one ounce a day, and in the third and fourth about



Figure 7. Scales.

five ounces a week. It should have doubled its weight at five months. For the next two months it ought to gain about two-thirds of an ounce a day, and from seven to twelve months about a pound a month.

If the infant loses in weight or fails to gain there is something wrong, and the physician must be notified. While the child may apparently feel well, it is sometimes im-

possible without the scales to say whether it is doing well or not. Any loss may be due to a deficiency in the quantity or to the poor quality of the mother's milk, evils which can often be corrected in her supply if taken in time. Perhaps, however, they may have to be offset by the addition of a little artificial food; this subject is considered in the chapter on feeding the baby.

The average height of infants at birth is twenty and one-half inches. During the first year the baby grows in length a little more than eight inches. During the second year the increase in height is only three and one-half inches. From this time on during childhood the gain is from two to three inches a year.

From an immense number of recorded observations the following statistical averages have been compiled:

Weight at birth.....	7 1-2	pounds
Height at birth.....	20 1-2	inches
Chest circumference at birth.	13 1-2	inches
Head circumference at birth.	13 1-2	inches
Weight at one year.....	20	pounds
Height at one year.....	29	inches
Chest circumference at 1 y'r.	18	inches

The teeth are cut in groups with an interval between; at one year of age a baby should have six teeth, and may have twelve. All the teeth should be cut by the time the child is two or two and a half years old. The teeth may come through almost unnoticed; on the other hand, they often cause serious disturbances, and the child becomes nervous from sleepless nights and indigestion. Occasionally apparently healthy babies have a rise of temperature and severe gastric and intestinal disturbances with the cutting of each tooth.

Heredity may play an important role in dentition. In some families the teeth come early, and in others late; in some the teeth come with difficulty, and in others they give no trouble; some families show regular teeth, others irregular ones. Rarely does the breast-fed baby have as much trouble in cutting the teeth as the one reared on the bottle.

The habit of rubbing the gums when a child is cutting a tooth is not justifiable under all conditions. If, however, the tooth is just about ready to come through there

can be no harm in resorting to this method of hastening it; remember, however, that the finger must first be thoroughly cleaned. Then if the finger be dipped in ice water and rubbed over the swollen gum, it gives the baby instant relief. Rubbing the gum with a small piece of ice wrapped in a clean piece of old linen will often relieve irritation. The gums are not lanced as frequently as formerly; this course is now considered advisable only in extreme cases. There are twenty teeth in the first set, and they normally appear in the following order:

Months.

- | | |
|-----------------------------------|----------|
| 1 Two lower central incisors..... | 5 to 9 |
| 2 Four upper incisors..... | 8 to 12 |
| 3 Two lower lateral incisors..... | 12 to 18 |
| 4 Four front double teeth..... | 12 to 18 |
| 5 Four canine— | |

Two lower or stomach teeth... 18 to 24

Two upper or eye teeth..... 18 to 24

- | | |
|---------------------------|----------|
| 6 Four second molars..... | 28 to 34 |
|---------------------------|----------|

The washing of the mouth should be continued through infancy, and when the teeth come, they should be thoroughly rubbed every morning with a cloth moistened with boric acid solution, or a solution of

bicarbonate of soda. A soft brush may be used when the milk teeth are all in. When solid food is given, waxed floss silk should be drawn between the teeth after each meal. Decay can be prevented by strict attention. The baby's teeth should be examined by a dentist as early as the age of two years and at frequent intervals after. The prevalent notion that decay of the first teeth is harmless is not justified by the facts. Disease of the milk teeth may be the cause of tooth-ache, impaired digestion and deformity of the permanent teeth.

During the ninth and tenth months the child will usually attempt to bear its weight on its feet, and at eleven or twelve months it can stand with assistance. From the thirteenth to the fifteenth month it is usually able to walk alone. Under no circumstances should it be urged to stand or walk, and none of the contrivances for teaching babies to walk should be used; when the time comes and the muscles are strong enough it will walk.

At the end of the first year the baby begins to say papa and mamma. Other words are gradually picked up, and toward the end

of the second year the baby begins to put words together in sentences of two or three words. In learning to talk, names of persons are acquired first; then names of objects, verbs, adverbs and adjectives come in order; personal pronouns come last. Undue urging of the child to talk and "showing off" its precocity are greatly to be deprecated.

In occasional cases the breasts of an infant of either sex a few weeks after birth may become swollen with an accumulation of milk which was termed "witches' milk" by the old German midwives. Mothers are often alarmed when the swelling appears, but this will promptly and harmlessly subside if properly taken care of. The breasts must not be massaged. Camphorated oil should be carefully rubbed over the swollen parts which should then be padded lightly with cotton held in place by a smooth binder. This dressing is not to be disturbed for four or five days, when the swelling will be found to have entirely disappeared. Care should be taken in handling the baby not to bruise the tender breasts.

CHAPTER VII.

Care of the Baby.

Dressing the Baby.—In a baby's outfit (*) the band is the most important garment. It should be at first simply a

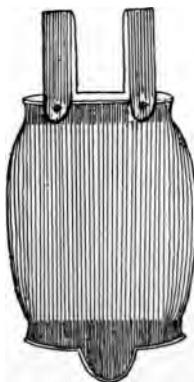


Figure 8.

strip of soft flannel, and the edges, since hemming and featherstitching press into the tender flesh, should be pinked. Later the all wool or silk and wool barrel-shaped band may be put on. (Fig. 8.)

(1) The author is indebted to Miss Flora E. Krauch for valuable information on clothing for the baby.

This garment has shoulder straps and tabs over the chest and the abdomen. Sometimes the straps are made adjustable in order that they may be altered as baby grows or the band shrinks. These bands must be worn until the child is through teething. If extreme heat causes discomfort the shirt may be removed, as the shape of the band protects the chest and abdomen better than the shirt would do and also leaves the neck and arms free. Bands are made in sizes to fit infants and children up to four years.

The shirts should be opened down the front, and made with loose sleeves so that they will not bind. They may be either light weight all wool, silk and wool, or, if an all wool band is used, all silk. It is desirable to get the second size in the shirts, as the first size is outgrown in a short time.

The diaper should be made of soft absorbent material, such as cotton or linen birdseye, since the oftener these are washed, the softer they become. The cotton stockinette, shaped diaper is excellent as it fits snugly at the waist, and is large and baggy at the seat. (Fig. 9.) Being made of a fabric

that is elastic and yielding, it absorbs readily, is easily washed and dries rapidly.



Figure 9.

The pinning blanket, or Barrow coat as it is sometimes called, is made of soft flannel

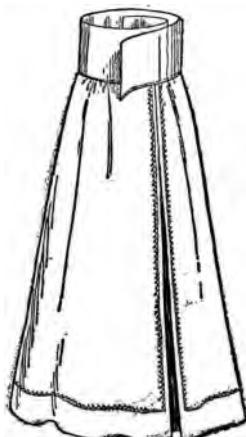


Figure 10.

sewed on a cambric band or waist. (Fig. 10.) If made on a waist there should be a

button and button hole on each shoulder, as it can then be changed as often as necessary without undressing the baby. The pinning blanket is worn by both summer and winter babies. This garment keeps the feet warm and protects the skirts and can be changed

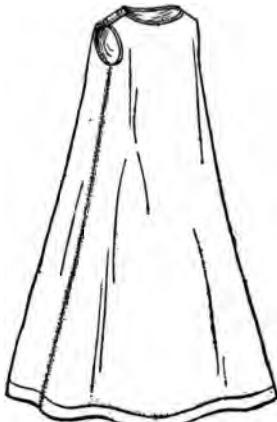


Figure 11.

as readily as the diaper, thus adding greatly to baby's comfort.

The flannel skirts should be made either on a cambric waist which pins in the back, or should be made entirely of flannel in the princess or reform style, opening on the shoulder, with neck and armholes neatly bound. (Fig. 11.) The former is recom-

mended for summer babies, and the latter for winter babies, except where the rooms are kept unusually warm.

A baby's feet must be kept warm at all times. In winter use cashmere stockings long enough to pin to the diaper, and, if



Figure 12.

no pinning blanket is used, a pair of knitted bootees over the stockings. In summer use light cashmere or silk stockings, or knitted bootees without stockings.

White skirts should always be made on waists which open at the back. (Fig. 12.) The material may be a soft finish nainsook or mull which may be hand or

machine made. Where the dresses are of sheer material a white skirt may be worn. In this case slip the flannel skirt into the white one, and then both into the little slip or dress, draw the three garments on from the feet up, and with one turning of the baby all three are easily adjusted.

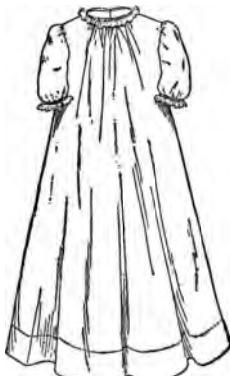


Figure 13.

For the slips (Fig. 13) and dresses (Fig. 14) use very soft nainsook and Persian lawns. Choose the simplest styles, such as the bishop style or one that has a yoke formed of tucks and feather stitching (see Fig. 14). Avoid ruffles and yokes. The length of the dress from the neck down should be about thirty inches, and the petti-

coats must conform to this length. The slips and dresses are closed in the back with small, flat buttons, and with ribbon or bodkin tape at the neck.

In a cool room or in the morning before the bath, wrappers of flannelette, flannel



Figure 14.

or cashmere may be put on (Fig. 15). These are superior to the shoulder blankets or shawls, as the sleeves protect the arms, while the shawls being loose are likely to make uncomfortable folds. Tufted quilts of cheese cloth, nuns veiling or silk are convenient articles for the nursery, as well as cashmere or zephyr sacques, to use when a heavier wrap is required. (Fig. 16.)

At night use the band, shirt and diaper, and a long loose gown made either of a

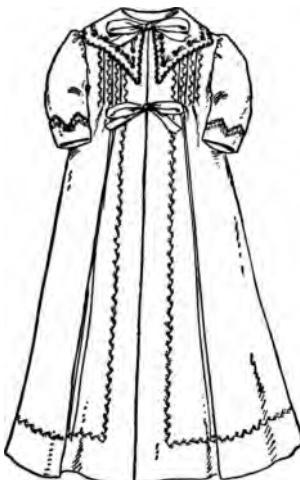


Figure 15.

light twilled flannel or of cotton stockinette. (Fig. 17.) The latter is the better, and



Figure 16.

can be had in sizes up to two years. It is absorbent, easy to wash, does not shrink and

being made with draw string through the hem, can be closed like a bag.

The time for changing long clothes for short ones depends entirely upon the season. In summer it may be done when the child is three or four months old, and in winter at the age of five or six months.

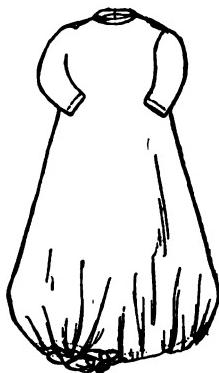


Figure 17.

The band, shirt and diaper remain the same in quality and often in size; the flannel skirt and the white skirt are each on a cambric waist in order that the weight may hang from the shoulder. If the diaper slips down as baby becomes more active a diaper waist is advisable, holding the diaper in place without constricting the body. (Fig.

18.) The same kind of nightgown is used at this period as in younger infancy.

Stockings are now worn, also soft kid moccasins or paper soled shoes. The selection of foot wear requires great care. The paper soled shoes or moccasins should be replaced by shoes with soft leather soles



Figure 18.

as soon as attempts at walking are begun, as babies beginning to walk need better support and foundation for their feet than the moccasins give. All children's shoes should be made on a straight last with full round toe.

At the age of about one year and a half, a light waist is put on over the shirt and band,

and on this is buttoned the little drawers and skirts. The drawers should be deep through the seat and short on the side, the seamless drawers being preferable. For summer they are made of soft cambric or nainsook; for winter soft knit cotton and wool. Ankle length drawers can be worn under the white ones. Hose supporters are now used, and as most waists have tabs with eyelets on each side, the pin of the hose supporter is put through these, thus adding to baby's comfort. Both flannel and white skirts being on bands, button on the upper row of buttons on the waist.

For night wear, the night drawers with feet are used, as they give freedom of motion and protect the child, should the covering be displaced. (Note also bed clothes fasteners.)

Play suits and creeping aprons can be purchased in sizes from six months to six years. They are made of blue or pink checked gingham, buttoned the full length of the back. This garment protects the underwear and allows plenty of freedom.

The Baby's Outfit.—An average outfit for the baby contains the following articles:

CLOTHING.

- 4 straight flannel bands.
- 4 knit bands.
- 4 shirts.
- 4 pinning blankets.
- 4 flannel skirts.
- 3 white skirts.
- 4 night gowns.
- 8 day slips.
- 4 dresses.
- 3 wrappers.
- 2 sacques.
- 4 pair stockings.
- 4 pair bootees.
- 6 dozen diapers.
- 3 quilted pads.
- 3 tufted quilts.
- 2 bath aprons.
- 6 bibs.
- 2 hair pillows.
- 4 pillow slips.
- 1 coat.
- 2 caps.
- 1 pair mittens.
- 1 veil.

TOILET ACCESSORIES.

1 toilet basket, safety pins, small, medium and large.

6 towels.

6 wash cloths.

1 soft sponge.

1 brush, soft bristles.

1 comb.

1 soap box.

1 talcum box.

1 powder puff.

Soap.



Figure 19.

Nursery Comforts.—Safety straps for carriage, gocart or high chair, made of

leather, easy to adjust. (Fig. 19.) Traveling toilet basket for home or traveling, in appearance resembling a lunch basket, made with granite cup, easy to carry. (Fig. 20.) Child's toilet seat, can be adjusted to any toilet seat. Folding bath tubs, the best are made with oak frame, 30 inches long, '22

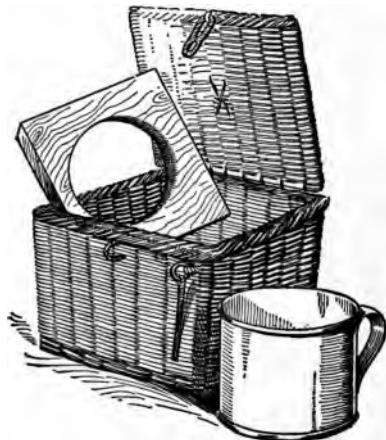


Figure 20.

inches high, 17 inches wide. The tub itself is made of heavy duck, rubber coated, flexible, with outlet at bottom for emptying after use, supplied with pocket at the end for sponge, etc. (See Fig. 21.)

Among other nursery comforts may be mentioned the bed clothes fastener, the

small hot water bags, baby record books and scales.

The baby's clothing takes up a large amount of room and if an article of furniture is needed for this purpose, the author would recommend the handsome cabinet as



Figure 21.

shown in the illustration. This cabinet is about four feet high, four feet long and two and one-half feet deep. (See Fig. 22.) Down the front is a number of drawers. Around the four sides on top is a temporary railing the front of which can be dropped. Inside the railing is a hair mattress or pad



Figure 22.

about two inches thick. The object of this is to have something on which to place the baby occasionally. During the day the infant is taken up many times to be changed, bathed, fed, etc. The top of the cabinet makes a safe and comfortable place to lay it, being much better and more convenient than the knee of the nurse. After a few

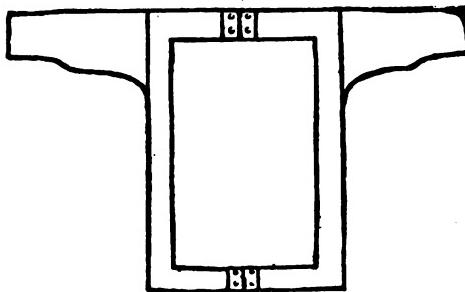


Figure 23. Drying Frame.

months the railing can be removed, and the cabinet becomes a valuable piece of furniture.

A hot water bag is an indispensable article in the nursery, but great care must be taken in the use of it about the baby. It should never come directly in contact with the skin, and should not be hot. The skin of infants is very sensitive and burns eas-

ily, consequently the testing of the temperature should be made by placing the bag against the face of the nurse or mother.

Drying frames made of white wood with non-rustable hinges are indispensable nursery articles. (Figs. 23 and 24.) The little



Figure 24. Drying Frame.

woolen shirts and stockings are stretched on these frames when laundered and will not shrink when drying.

The Bed.—The best bed for the first few months is a wicker bassinet. (Fig. 25.) This basket or bed fits into a stand which can be carried or rolled from one room to another without disturbing the child. In the bed use a soft hair

mattress covered with a rubber sheet, and over this place a quilted mattress pad. A half dozen sheets of soft muslin or linen will also be needed. For the covering use a pair of light soft wool double crib blankets, or tufted cheese cloth or silk comforts.

When the baby is about six months of age



Figure 25.

the bassinet should be abandoned for a child's bed, and care must be taken in the selection of this bed. It may be of brass or enameled iron with sides which drop. The sides must be high and the rods close, so that it will be impossible for the baby to get either its body or head between the bars. Serious accidents have happened in this

way. Select a bed which is large enough for the entire childhood.

The mattress should be thin and of hair, not feathers nor wool. Over this place a rubber cloth and then a sheet doubled. In winter a quilt may be placed over the rubber sheet. A pillow may or may not be used; if it is, it should be thin and made of hair. The coverings should be light in weight but warm. The bed must be thoroughly aired daily by exposing every part of it to fresh air and sunlight.

It is a frequent fault to keep the child too warm in bed. If the child perspires, there are too many covers.

Rest and Sleep.—The position in which the baby lies is of no consequence after the first few days; some babies will lie on their stomachs, some on their sides and some with their hands over their heads.

For the first two years at least children should be put to bed at six o'clock. During the second year they should be undressed at a certain time every day, preferably after the morning bath, given a bottle of milk, and put to bed. Usually this nap will last from two to three hours.

Children sleep later in the morning if awakened about ten p. m. and fed; at this time the napkin should be changed. A healthy child will immediately go to sleep again. Poor sleep in babies is a sign that they are not well. Infants who are fed three or four times during the night frequently do not sleep well. Mothers sometimes sleep with their babies, and the result is that nursing becomes more and more frequent until the baby finally suffers from indigestion and disturbed rest. Insufficient or too much clothing may cause restlessness. Sleepless babies are as much in need of a physician's care as if they were seriously ill.

At first the baby should sleep nine-tenths of the time, and though the directions are to awaken and nurse it every two hours, often the nurse cannot arouse it, and even if she is successful, the child will sometimes fall to sleep again before the nursing is finished. Directly after each nursing the child should be put back into the crib, and remain until the time comes to nurse again. As a rule with clock-like regularity the little thing will let its wants be known.

In lifting a child from the crib the spine

must be supported. To do this, grasp the clothing just below the feet with one hand and slip the other underneath the shoulders and head. Never attempt to lift it by the arms or hands.

The Bath.—Until the navel is healed the infant should not be given a full bath; let face, head and hands be washed with warm water and castile soap; avoid getting soap into the eyes. Rub the body gently with sweet oil or benzoated lard; remove the excess of oil with a soft towel. If, however, the oil seems to irritate the skin, as it may do in very warm weather, a sponge bath may be substituted. After the cord has separated and the navel has healed, the child may be given a full bath. The temperature of the water for the full bath, for the first month, should be from 98 degrees to 100 degrees F.; after the first month, and until the sixth month, the temperature should be gradually lowered to 95 degrees, and from this time to the end of the second year it should reach 90 degrees. When the baby is two or three months old, a little splash of cold water, directly from the tap, can be dashed over

the head, chest and shoulders; and this treatment may be increased as fast as it becomes agreeable to the infant. You must not, however, do anything to cause the baby to fear the bath, consequently the amount of cold showering should depend much upon the effect it has upon the infant.

A child will learn to love the bath, which is just as necessary for it as food or sleep. After the soap bath, rinse the body with warm clean water to remove any excess of suds. Then after the cold shower take the babe across the lap, wrap it in a bath apron made of soft heavy turkish toweling, and rub it perfectly dry. Follow this by a massage of the whole body, with light taps or spankings, to bring the skin into a healthy glow. It is surprising how much of this beating, or spanking, babies can be taught to bear.

Great care must be taken of the baby's eyes for several weeks after birth. Every morning at the bath the lids should be washed with a clean, soft, linen cloth dipped in lukewarm boric acid solution. Then by means of a medicine dropper the eyes themselves should be irrigated with some

of the same solution which has not become contaminated by passing the linen cloth back into it after washing the lids. Always remember to have the hands clean before treating the baby's eyes in any way. If pus appears in the eyes your physician should be at once notified.

Twice a day at least, the baby's mouth should be cleaned. To do this make a swab by twisting some absorbent cotton upon a tooth pick, and dipping it in a boracic acid solution. The usual method of using the finger wrapped with cotton, gauze or linen, is too apt to injure the delicate tissues.

The nostrils should be cleaned by means of absorbent cotton wrapped on the end of a tooth pick dipped in boric acid solution or a liquid alboline.

The bath should be given at a regular time every day; the time chosen being at least one hour after nursing. Because of the soothing effect of the bath it should, however, be preferably given just preceding a feeding and then after the feeding the infant will immediately go to sleep.

Many infants cannot endure the cold spray or the dash of cold water as recom-

mended and become very blue. In such a case the water will have to be either tepid or quite warm. Should, however, in any case the baby become blue from the bath it must be given a vigorous rubbing and wrapped up in warm blankets.

Many mothers prefer themselves to bathe their child and this is commendable. Certainly unless the baby has an experienced educated nurse, the mother should do so. It is a matter for great thoroughness. All the little folds in the arm pits, groins, buttocks, etc., must be cleaned. If soap and water does not accomplish it, a little liquid alboline will.

For the heat rashes stearate of zinc powder is far better as a dusting powder than the usual perfumed powders which clog the pores of the skin. On very warm days the baby can be left partly undressed at different times during the day. Such treatment will prevent the rash and if already present will aid in the cure of it. Boric acid powder in any form is liable to irritate the skin of a baby and should not be used.

In the summer a sponge bath when the babe is undressed at night will often be the

means of its resting better. A wash cloth made of cotton stockinet is very useful in applying the soap. Flannel or diaper cloth may also be used. A fine quality sponge readily removes the soap from the ears and other places. The best bath apron is absorbent and non-shrinkable; it is made of a soft knit cotton back material, heavily fleeced with soft nap on the face.

Most soaps are irritating to the tender skin of a new-born infant. Castile soap is as good as any, if you get the best, but there are many counterfeits. One of the finest imported brands, a German soap, "Basis Seife," contains a large amount of oil and is an excellent soap for the bath of infants.

If the skin is very sensitive and chaps easily, discontinue the use of soap for a few days, and give a bran or salt bath. (For making such baths see appendix.)

The Bowels.—For the first few days the infant passes a tarry material called meconium. This gradually changes to brown and then as food is taken the usual yellow begins to appear. By the end of the first week the movements should be a canary yellow, the

odor that of sour milk. The stools should not contain any mucus or undigested curds; foul smelling, greenish and frothy stools mean intestinal indigestion. Two movements a day is about normal; more than four should receive medical attention. The observing mother soon becomes familiar with the normal character of the stools and is able to determine variations and describe them to her physician.

It is surprising how soon the infant can be taught regular habits in emptying the bladder and bowels, and it is not unusual to see one well trained in this respect by the eighth week. All that is necessary to teach this to the average infant is patience on the part of the mother or nurse. At a certain time each day the napkin is removed, and the child is held over a chamber; the time selected corresponding with the usual time for the bowels to move. In beginning the practice a small gluten suppository or a little water put into the rectum will assist in regulating the habit.

If the bowels move of themselves once a day and the passage is small and somewhat constipated the mother must not be alarmed,

that is, if the child is perfectly comfortable. This condition usually is corrected as the food becomes stronger. If the child is disturbed by constipation, an injection of a tablespoonful of sweet oil may be given, or half a teaspoonful of glycerine in one table-



Figure 30.

spoonful of water. Sometimes a gluten suppository, infant size, to be obtained at the druggist's, may be inserted in the rectum.

A bulb syringe with a smooth hard rubber tip (see Fig. 30) should be used for the injection or a soft rubber catheter, No. 12, to

which is attached a glass funnel. (See Fig. 31.) Not more than two ounces should be injected at a time. The tip should be lubricated with oil or vaseline and inserted by sight in order not to do injury.

Constipation can often be overcome by massaging the abdomen. This should be



Figure 31.

done when the stomach is empty; beginning low down on the right side just beyond the median line, carefully rubbing with a rotary motion, with the tips of the fingers slowly working up to the ribs, and then across over the transverse colon to the other side, and down the left side to the groin. The

time consumed in making this circuit should be about five minutes. In obstinate cases this method gives surprisingly good results.

Often the bowel movements are irritating and the anal region becomes quite red and inflamed. This is generally corrected by improving the intestinal digestion. In the meantime something must be done to relieve the inflammation. No water should be used in this region and the buttocks should be cleansed with olive oil, any excess of oil being removed by rubbing very gently with soft linen. A slight redness or chafing should be treated by drying the parts very gently and applying a small amount of stearate of zinc powder. Any serious erosion or inflammation should be seen by a physician.

The redness may sometimes be due to infrequent changing of the soiled napkin, or to using napkins which have been merely dried and not washed, or to napkins which have been improperly laundered.

Most infants are troubled more or less with colic, usually the greatest sufferers from it being bottle-fed babies. It is a symptom of indigestion, but may come from

other causes, such as constipation, cold feet and hands. A colicky baby completely upsets the household and disturbs the mother, who needs all the rest and sleep she can get. If the cause be constipation or acute indigestion, a dose of castor oil and a flushing of the bowel with a warm salt solution will usually suffice. Milder cases may often be relieved by drinking a little warm water or a teaspoonful of warm peppermint water, or a tablespoonful of warm water in which a soda-mint tablet has been dissolved. A hot water bag or hot flannel applied to the abdomen will sometimes answer.

The feet, hands and body of a colicky baby should be kept warm. If repeated colics are due to constipation, the mother can regulate the infant's bowels by taking a laxative herself every day. Often the trouble is due to the mother's indiscretions in eating, and to her not keeping regular hours. If colic continues and the baby shows signs of indigestion, a physician must be consulted. Don't give paregoric, hot whisky or brandy as is too frequently done. The "soothing syrups" are not necessary and are often positively injurious; it is

said that many or all of them contain opiates. Whenever the child becomes so restless that a resort to something of the kind is under consideration the physician should be consulted. Many articles of food which normally produce no discomfort to the mother when eaten will do so to the nursing baby. It is the popular opinion that tomatoes should not be eaten by a mother who is nursing her child. It is possible that the dressing put upon the tomatoes is the cause of the trouble. Lettuce and strawberries eaten by the mother are also looked upon as injurious to the nursing baby. The mother will have to determine this by exclusion. Should the baby have a colic which can be directly traced to some article of food, then such food must be eliminated from her diet.

Every mother should learn to give her baby a high colonic flushing. The apparatus required is a fountain syringe and tube to which is attached a rubber catheter. (Fig. 31.) The bag being filled with boiled water is hung about four feet above the bed. The child is now placed either upon its back or left side with the hips elevated. The

catheter well oiled is inserted into the rectum. As the water flows the catheter is gradually advanced until it has passed the full length. Often the catheter will curl upon itself and will require repeated attempts to cause it to advance into the bowel. The colon fills easily and a pint or more of the water will flow in before any passes out along the tube. By watching the bag one can tell how much is being introduced. The washing can be continued until a gallon or more of solution has been used.

Irrigation of the colon is very useful in severe colics resulting from indigestion. It removes the undigested food and the products of decomposition. Unless ordered no medication should be used in the water other than common salt, a teaspoonful of salt to the pint of water. The temperature of the water when the child has no fever should be about 90 to 95 degrees F. Under ordinary care these irrigations are free from danger and are a great help in the treatment of infantile intestinal diseases.

Napkins.—Soiled napkins should be removed from the nursery immediately. They should be kept in a receptacle with a tight

cover and washed as soon as possible. They should not be allowed to dry, but should receive a rough washing at the earliest possible moment, and then be put to soak in clear water.

For the final washing, hot suds and boiling for at least fifteen minutes are necessary. After this the napkins should be thoroughly rinsed and dried. Never put them on the child when they are damp. Under no circumstances should a napkin be dried and used again without washing.

Kidneys.—For the first day or two of its life the infant may not pass much urine. When it begins to get milk the urine becomes more abundant. The napkins must be changed as often as soiled. Strict attention to this matter will often save much trouble for the mother and irritation to the child. Erosions and inflamed skin about the buttocks often result from neglecting to change wet napkins.

During the second year a child that has been put to bed at six o'clock should be taken up between ten and eleven to urinate.

For the first three years wetting the bed may be considered a normal phenomenon,

and, in fact, it may be untrue to say that a longer continuance of it is abnormal. Physicians are often consulted by mothers for this habit in children between five and twelve years of age, and, if nothing wrong is found on examination, there is no cause for worry.

Do not punish the child, for if the habit comes from indifference the child will soon become ashamed of it. Give such children plenty of fluids in the day, but none after four p. m. At eleven o'clock it is advisable that the child be taken up and allowed to urinate. Should there be no amelioration of the trouble after the third year, a physician should be consulted in order to be sure that there is nothing seriously wrong.

Circumcision. — This operation is not necessary in all cases. In fact the fad of a few years ago of circumcising every male baby has now given place to conservatism in this respect. When the foreskin is short, and easily retracted, there can be no reason for the operation other than a religious one. The physician will instruct the mother in the care of the foreskin, as it is necessary that cleanliness of this organ be maintained,

Later the child must be taught the importance of continuing this treatment.

Exercise.—Besides the massage which is given after the daily bath, the baby should be allowed the exercise which it obtains by kicking, screaming, waving its arms, etc.; therefore, the clothing should not be so tight as to restrict its movements. Some time during the day, all its clothing being removed for fifteen minutes, the infant should be given free use of its limbs in a warm room, upon a bed where it may kick and play.

Babies have nerves, the same as grown people, and the less they are excited, the better it is for them. It is a well-known fact that babies of the poorer classes are less nervous than those of the rich. This is partly due to the fact that mothers are too busy with other work to be continually entertaining and exhibiting them. If left alone, they find enough to amuse them. To be continually tossing the baby, showing it new things or making a noise to amuse it, is excitement, not play, and what the child needs is rest, especially if it has inherited a nervous temperament.

Crying.—Babies will cry, and a cause can-

not always be assigned. If a baby cries a half an hour every day it may be considered normal, as crying is often good exercise.

When the baby cries from pain, the character of its cry is sharp and piercing; it generally shows distress by drawing up its legs and by other manifestations. The child will fall asleep when exhausted and soon awake, often with a scream. The cry of indulgence is the one with which we are most familiar; the infant cries to be rocked or carried, or for the gratification of some bad habit which it has formed. If it stops crying when the want is gratified, and cries again when the object of its desire is taken away, you may know that this is the cry of indulgence. The treatment of such a case is to let the child cry it out. Hours may be required but the rebel will be conquered. A second discipline may be needed, but a third is rarely necessary.

It is surprising how soon some young mothers detect the difference in these cries, and it is quite important that they should be able to do so, as they can then institute the proper treatment.

The cry of hunger is a worrying, fretful

cry, and the baby usually commences a vigorous sucking of the fists. It stops when the hunger has been satisfied.

The cry of indigestion is often mistaken for hunger and while the crying may cease when given the food, it commences with increased vigor after the feeding.

When the baby cries see that the clothing is warm, that the napkin is not wet, or that the feet and hands are not cold. Through fear of causing a rupture many mothers spoil their babies by taking them up and otherwise indulging them. Crying will not produce a rupture if the binder be properly applied.

The Nursery.—A nursery which has sunlight, fresh air and quiet should be selected. A southern or eastern exposure is preferable. During the first year the average baby spends three-quarters of its time here, so the necessity of sunshine is evident.

The air should be kept as pure as possible, and there should be no plumbing in the room. There should be dark shades at the windows, but no other hangings that cannot be washed. Let the floors be bare except for rugs. Twice a day the room should

be thoroughly aired, the baby having been removed in the meantime. The temperature of the nursery should be about 68 degrees F., never above 70 degrees F. During the first two or three months it should never be below 65 degrees F. Even at night the temperature for the first few months should not be below 65 degrees F.; after the first year it must be much lower. The child who is kept in a room that is too hot perspires freely and takes cold easily.

For accurately gauging the temperature it is important that the thermometer be hung close to the bed of the baby, as there are such great variations in the temperature of different parts of most rooms.

In order to overcome excessive dryness of the inside air in winter a shallow receptacle filled with water should be placed in the nursery. Especially is this true in apartments heated by steam or hot water.

Going Out.—The time when the baby shall first go out of doors depends upon circumstances. In warm weather a healthy infant may be taken out at the end of the first week, but it must be at least a month old before it can go

out in winter. Begin by airing the room with the baby in it, and then after a few days take the baby out doors. In cool weather it should be kept in the sun, and out of the wind.

In summer the baby should be out most of the day, except in the extreme heat of the day, and in inclement weather. In the winter and early spring, the outing may be between the hours of ten and three, according to the weather. If under three months of age it should not be taken out when the temperature is below freezing.

Fresh air is absolutely necessary to the health of the baby. It stimulates the growth, purifies the blood, aids digestion, improves the appetite. If possible let the baby sleep out of doors, especially during the warm weather. It will be stronger for so doing. Young infants living in cities should be taken to the park daily and given the benefit of the pure air found there.

Nursery Maid.—The selection of a nursery maid is often a difficult problem; there are so many qualifications necessary that it seems almost impossible to obtain the proper person. She should

be intelligent, experienced, kind, cleanly and healthy. There is no economy in selecting one who does not combine all of these qualities; if you are compelled, however, to have one less desirable, it is your duty to teach her. See, for instance, that she is neat, that her teeth are brushed three times a day, that she has a daily bath, that she never puts her finger into the baby's mouth, and that she understands why she should not taste the baby's food by putting the rubber nipple into her own mouth. Let her wear a uniform or dress which can be changed frequently and washed. If obliged to keep neat and clean the nursery maid is inspired to do better work.

In the girl you are about to select to be with your baby night and day, health is a necessity; she should be physically sound. A girl with poor teeth, for instance, cannot have good health; she suffers from indigestion, bad breath, etc., she is not the proper person to take care of your child. When making your selection, send your nurse to your physician for a thorough examination. She may have an incipient tuberculosis, a

bad heart, or something which you might not detect, and which would be a detriment to the welfare of your baby.

If, however, a paragon is finally procured who is willing and able to devote herself exclusively to the baby, the mother should not ignore her own obligations to the child by surrendering all her own responsibility. As a matter of fact, any day on our walks or in our parks we can see evidences of the indifference with which some mothers are giving up the care of their children to incapable and otherwise undesirable nurses.

Nursery Fence.—Very helpful to the mother when the baby must be left alone occasionally is the nursery fence, which can be put up in almost any room in the house, with little trouble. This fence can be purchased or one can be made. It takes up small space when not in use as it is made to fold up.

The purpose of this fence is to keep the baby in a small inclosure where it cannot harm itself or injure articles in the room. When the baby begins to sit up the mother will find it very convenient; she can place the baby in this inclosure upon a rug with

whatever toys are necessary. A baby left to play by itself in this way is well off, and gives little anxiety to the mother.

Playthings.—Toys amuse the baby temporarily but it soon tires of them and wants something else, and the more you get, the more the baby wants. It is unnecessary for the first few months to amuse an infant by toys. The baby will often amuse itself by playing with its own feet and hands, and by watching the nurse and mother about the room. When the baby begins to creep and walk toys are useful, but care must be taken in their selection.

The baby naturally puts everything into its mouth, therefore articles must be chosen which can be cleaned by washing and which are not rough. Allow no painted toys or toys with sharp points, or small articles which might be swallowed, such as marbles, buttons, safety pins. After the age of two years all toys should be selected, not only for amusement, but for educational value. A few toys, well selected, are of more value to the child than many ill chosen ones.

Beware of toys sent in by the neighbors; they should not be used if sent from a home

where there has recently been any contagious disease.

Carriage.—The baby carriage must be selected with the idea of comfort for the infant. Therefore it must be roomy, with strong but sensitive springs, and must have a top which will protect the baby from the sun and draughts.

A strap which completely encircles the waist of the baby and fastens to either side of the carriage, affords more safety than the usual straight strap.

Sucking Habits.—On no account should the baby be given the pacifier or rubber nipple to suck. The habit is soon formed, and is an uncleanly one. It certainly interferes with digestion and often leads to infections of the mouth.

Sucking the thumb or finger is another habit which must be controlled early. Frequently the mouth is dreadfully disfigured from the pressure which the bones were constantly subjected to by this habit. Also the finger or thumb ceases to grow and becomes a deformity which will be a source of sorrow to the mother and the child. In very early cases tying the hands down or

putting on mittens will suffice to cure the habit.

Dirt-eating calls for the advice of the physician. It usually shows that the child is not in good health.

Bow-Legs.—Young babies are usually what is termed "bow-legged," but their little limbs straighten out as they become older, and the apparent deformity disappears.

Bow-legs appearing about the time the child begins to walk are not so much due to the weight of the child's body, as to malnutrition from improper food. It is surprising to see the beneficial effect upon such children of proper food. Legs which have been considerably deformed will become straight in a few months.

Kissing.—Do not allow kissing especially upon the mouth. From this practice many children have contracted infections, such as tuberculosis, diphtheria and numerous other grave diseases. If it is necessary to kiss children, let it be on the forehead or cheek, but there is danger even in this.

Relations to the Physician.—The mother should obey implicitly instructions given

her by the physician, and before any changes are made in treatments he should be consulted.

Teach the baby early not to be frightened by the physician. Such expressions as "The doctor won't hurt you," or "If you don't stop we will send for the doctor," cause the baby to fear him.

The child should be instructed as soon as possible to open its mouth and put out its tongue. In times of sickness a child who can and will do this has a great advantage over those who will not.

CHAPTER VIII.

The Baby's Food.

Hygiene of Nursing.—Nature's food for the newly-born child is mother's milk and so deeply is this fact, that it is the best impressed upon the minds of physicians that many will refuse a case of pregnancy if the woman, even though she be perfectly healthy and has an abundance of milk, says she does not intend to nurse her baby. Fortunately such cases are rare because most women realize the value of mothers' milk for the child and look forward to the nursing of their babies with pleasure.

The nursing baby generally makes better progress in weight, sleeps better, has less colic and cuts its teeth with much less disturbance than the one fed upon the bottle. Nursing has a distinctly beneficial effect upon the mother also. It is a well known fact that with the nursing mother involution of the uterus, that is the return of the womb to its normal condition, is

much more rapid than in one who does not nurse her baby.

Many mothers fear their babies will starve if something is not given them to eat immediately after birth. This is erroneous. As a matter of fact it is not necessary that the baby have artificial food during the forty-eight to sixty hours that the breast milk is being established.

Sometimes it seems almost impossible to make the child take the breast, and every expedient must be tried. It may be necessary to start the milk with a breast pump, or if it does not flow readily, hot compresses for a few minutes over the breast will usually cause it to do so.

Regular weighing of the baby will give important data regarding the quality and quantity of the milk. The condition of the bowel movement is also a good indicator. In many cases when the mother's milk does not seem sufficient at first, an increase will be found gradually to occur.

Between nursings the baby will need some warm water, and care must be taken that it is not too warm nor too cold. It should be either boiled or distilled unless it is a pure

spring water. It is imperative that the bottle be held by the nurse until the infant is through drinking. From two to four ounces of water may thus be given in the twenty-four hours to a very young baby.

Very often the baby is fretful at the breast because of the manner in which it is being held. Care must be taken that the



Figure 32.

child is comfortable, and that the nipple does not enter the mouth at an angle. If the mother is nursing the child in bed, she should lie well over on her side with her arm up, and her hand back of her head, holding the breast with her other hand. This may seem a trivial matter, but some children will not take the breast while in a poor position, or if they do they continually fret

because of it. Again, the supply is obstructed when the nipple is at an angle and the infant may not obtain enough. Never fall asleep with the baby at the breast.

Sometimes the nipple is imperfect and the baby is unable to grasp it; we are then compelled to resort to other means, the feeding being satisfactorily accomplished with the artificial nipple (Fig. 32). This shield may also be used when the nipple becomes sore or cracked.

Sore nipples are often caused by too frequent and too long nursing. As soon as the baby is removed from the breast, the nipples should be washed with boric acid solution and thoroughly dried with absorbent cotton. Do not allow the vest or gown to come in contact with the nipples; keep a piece of soft linen over them. The physician should be notified whenever abrasions appear because they often result seriously.

The artificial nurser should receive the same care as the rubber nipple; that is, it should be boiled and kept in a solution of boric acid.

If the infant vomits immediately or soon after nursing, it may indicate that too much

food has been taken. In correction, the length of the feedings should be shortened, or the intervals between them increased. The milk should not be taken too fast; to prevent this the feeding should if necessary be frequently interrupted. Again, tight clothing or tossing the baby just after nursing will cause this vomiting. If vomiting occurs longer after nursing and is continued, it shows an indigestion which must be corrected by the physician.

No nursing should be longer than fifteen or twenty minutes. It may be very difficult to keep the baby awake and occasionally all means will fail to arouse it even long enough to make it grasp the nipple; in such a case wait until the next feeding hour. If it should waken in the meantime a little water will quiet it. This condition does not last long and you will soon find it ready and waiting at every nursing time.

The baby must not be allowed to remain by the mother or to sleep at the breast, as accidents to the baby may happen. Such treatment will also train it into habits which will make a slave of the mother.

During the first few weeks one breast at

each nursing furnishes plenty of milk, and it is better not to put the child to both breasts at one feeding. Write down on a piece of paper in the morning the hours for nursing and the breast to be nursed; then there can be no mistake. For instance:

Left	Right	Left	Right	Left	Right	Left	Right	Left
5	7	9	11	1	3	5	7	9

Usually the nursing mother does not menstruate for the first few months, but should she do so it does not necessarily follow that the baby must be weaned; on the contrary there is usually no evidence that the milk is being altered or that the baby is suffering. Sometimes the milk may be slightly reduced in amount and artificial feeding for a day or two may become necessary. And again, some infants are considerably disturbed and breast feeding has to be abandoned during the time. These cases, however, are rare.

Should the mother become pregnant while she is nursing her baby it will be necessary to discontinue the breast feeding. The weaning of the baby is considered on another page.

Schedule for feeding healthy infants during the first year:

	Quantity for one feeding. Ounces.	Quantity for 24 hours. Ounces.
Number of feedings in 24 hours.	10 10 10 8 7 6 5	15 to 30 25 to 35 15 to 30 10 to 15 24 to 40 28 to 42 30 to 45 35 to 45
Number of night feedings 10 p. m. to 7 a. m.	2 1 2 1 1 0 0	2½ 1½ 2½ 3 4 5 7
Interval between day meals. Hours.	2 2 2 2½ 3 3 4	2d to 7th day..... 2d and 3d week..... 4th and 5th week..... 6th week to 3d mo. 3d mo. to 5th mo. 5th mo. to 9th mo. 9th mo. to 12th mo.

This table applies as well to babies on the bottle as to those at the breast.

Hours for Feeding.

1 to 6 weeks.	6 weeks to 3 months.	4th mo. and 5th month.	6th mo. to one year.
7:00 a.m.	7:00 a.m.	7:00 a.m.	7:00 a.m.
9:00 a.m.	9:00 a.m.	10:00 a.m.	10:00 a.m.
11:00 a.m.	12:00 a.m.	1:00 p.m.	1:00 p.m.
1:00 p.m.	2:30 p.m.	4:00 p.m.	4:00 p.m.
3:00 p.m.	5:00 p.m.	7:00 p.m.	7:00 p.m.
5:00 p.m.	7:30 p.m.	10:00 p.m.	10:00 p.m.
7:00 p.m.	3:00 a.m.	3:00 a.m.
9:00 p.m.	10:00 a.m.
12:00 p.m.
4:00 a.m.

The table furnished for the hours of feeding by day is subject to modification. It may be more convenient to commence the feeding an hour earlier, for instance, at six o'clock in the morning. If this be so, the time in the schedule can be advanced one hour. A baby should be awakened for its food, otherwise there will be an irregularity which will disturb its digestion. Sometimes it is necessary to nurse oftener at night; this is usually determined by the awakening of the baby at a certain time every night with

a cry of hunger. Generally, however, a little water will suffice and will be better for the child than too much food.

Weaning.—The time for weaning varies with circumstances. It is generally believed, and probably with good reason, that mother's milk is not a sufficient diet for a baby after the ninth or tenth month. If the mother is strong and the child is growing, nursing agrees with both; under such circumstances, nursing might be continued until the end of the tenth month. If, however, there is a great drain on the mother, and she shows the effect of it, weaning must take place earlier.

If the baby stops growing and seems to crave more food, or if before this occurs the breast milk is known to be poor in quality, the physician may decide to combine artificial food with the nursing. Under no circumstances, however, should the baby's food be changed without the physician's advice. It is not unusual to see a baby whose digestion is seriously impaired by the improper substitution of other food by the mother.

Weaning a baby during very hot weather

is, of course, to be avoided if possible; defer the process until early autumn.

Allowing the baby during the first two years to taste food at the table is a dangerous habit. It is better for the child not to be brought to the dining-room during meals, but the comfort it affords the father, who perhaps does not get an opportunity to see it at any other time, must, of course, be considered. At any rate do not commence the habit of giving it little tastes of table food.

When the baby is weaned the best food to give is cow's milk, modified to correspond to the mother's milk. The writer does not think it advisable to give formulas for baby feeding, as this complicated duty belongs to the family physician, who should be consulted.

If the child is weaned slowly there is usually no trouble with the breasts, but in some cases it becomes necessary to wean rapidly and the breasts become quickly engorged. In such instances as little liquid as possible should be taken by the mother, the bowels should be freely opened and a tight breast binder skilfully applied by the physician or a nurse.

The saliva and the gastric juice are poorly developed in young infants. At first there is only saliva enough to keep the mouth moist; consequently starchy foods cannot properly be given an infant during the first few months—to this we refer in another place. The saliva has increased, however, by the third or fourth month and the baby commences to drool. This drooling is not necessarily a sign of cutting teeth.

When the mother finds she is unable to nurse her baby and the use of modified milk is not advisable, the wet nurse is the alternative. With careful selection she will prove the best possible maternal substitute. She must be carefully examined by a physician, never being taken on the recommendation of friends. She must be kept in perfect health, living upon plain wholesome food, keeping regular hours, being compelled to do a certain amount of light housework and to have plenty of out-door exercise. So necessary to the successful feeding of a child is the wet nurse's health, that she should live under a definite regimen prescribed individually for her by the family physician.

Artificial Feeding.—It often becomes

necessary to feed the baby upon other than breast food. This is called artificial feeding of infants, and is frequently a trying procedure to both mother and physician.

The best artificial food is undoubtedly cow's milk, modified in such a way that it will as nearly as possible resemble mother's milk in all the latter's constituents.

Many babies seem to thrive and grow fat on the much advertised baby foods, but the mother should never take the responsibility of using foods recommended by her neighbor; the food which may agree with one baby will not always be proper for another.

However, fat is not always the sign that a baby is healthy or will remain so. Even though some prepared food firm may show pictures of large fat babies, these pictures do not signify that all babies taking this food are healthy, or that they will be as strong through childhood as others who have been fed by more scientific or, it might better be called, more common-sense methods.

The code of medical ethics does not permit the physician to show his handiwork to the world through newspaper advertising.

If it did, the physician who rears his little patients in a scientific way upon modified cow's milk, could show healthier and stronger babies and children than we see in the baby food pictures.

While it is not the purpose of this book to instruct the mother in artificial feeding, a few facts regarding cow's milk and the necessity of care in preparing it may be useful.

Cow's milk in its natural state cannot be fed to very young infants, because, while it contains all of the elements of mother's milk, it does not contain them in the proper proportions. Changing the proportions of the elements so that it will make proper food for the baby is called "modifying" cow's milk. Cow's milk has less sugar and more proteids (curds) than mother's milk and its reaction is acid, while mother's milk is alkaline.

Milk is made up of solids and water. The solids consist of the fat, sugar, proteids and salts, being about thirteen per cent of the total amount. Water constitutes eighty-seven per cent. The total solids are about the same in mother's milk and cow's milk. The

proportion of the different ingredients is as follows:

Cow's Milk.		Mother's Milk.	
	Per cent.		Per cent.
Fats	3.75	Fats	4.13
Lactose (milk sugar)...	4.42	Lactose	7.00
Proteids	3.76	Proteids	2.00
Salts	0.68	Salts	0.20
	<hr/> 12.61		<hr/> 13.33

If the task were merely to modify cow's milk so that the proportions would be the same as in the mother's milk, there would be very little trouble, but when this is done there are other factors to be taken into consideration; the most important of which are the purity and the temperature of the milk.

Mother's milk is absolutely sterile, that is, free from germs, and is taken into the baby's mouth in such a condition. It is also of an even and proper temperature.

Cow's milk is not sterile one minute after passing from the udder. It contains bacteria which multiply rapidly. Again, so many cattle are diseased that the milk becomes sometimes a source of infection. Furthermore, when the milk is fed to the baby it cannot maintain the proper temperature during the entire nursing.

If it be necessary to feed the baby upon cow's milk, select it from a mixed herd of cows rather than from one cow or from a herd of high bred Jerseys or Alderneys. "Herd milk" varies little day by day, but milk from a single cow is liable to a wide variation.

Parents who take their bottle babies to the country to give them pure air should investigate the milk and water supply. They should visit the nearby dairy from which the milk for the child comes, ascertain when the cows were examined for tuberculosis, examine the milk cans and milk receptacles, be present at a milking and learn how careful or careless the milker is regarding cleanliness. Is the cow ever groomed and cleaned? Does the milker wash the udder of the cow and wash his hands before milking? Parents should know all about the milk fed their babies and if they will aid the physicians in this way it will not be long before each dairy will be striving to outdo the other in furnishing a supply of milk that will be pure.

As generally brought to the house, milk will not keep long because of the bacteria

which have collected in the milk in the process of milking, or in the transportation receptacles. Milk thus contaminated easily becomes sour. It may contain the germs of typhoid fever, scarlet fever, cholera, tuberculosis, etc. For this reason, unless it is heated to a certain point, it is dangerous for infant feeding. This process of heating is called sterilization or pasteurization, the name depending upon the temperature to which the milk is carried.

In order to sterilize the milk, it is brought to the boiling point, 212 degrees F., and is kept at this temperature for one hour. This destroys all germs, but renders the milk very indigestible, and therefore not proper food for infants.

The aim should be to obtain fresh and pure milk which will not require sterilizing or pasteurizing. In most large cities this is now possible, and much credit is to be given to the several concerns which are faithfully attempting to obtain this result.

Various forms of sterilizers have been invented, perhaps the simplest and most popular one being that known as the Arnold sterilizer (Fig. 33); since directions for

pasteurizing or sterilizing always come with it, a description is not necessary here.

When lime water is to be put with sterilized milk it should be added after the heating process, at the time of feeding.

To pasteurize milk it should be heated to from 155 to 167 degrees for thirty minutes. This preserves the milk and delays fermentation without interfering with its digesti-



Figure 33. Arnold's Sterilizer.

bility or altering the taste. This method at present is most popular. Its object is to destroy germs at a lower temperature than that used for sterilization. It can practically be accomplished by using a covered tin pail which is large enough to hold all of the nursing bottles for the day which contain the required amount of modified milk. In the bottom of this pail put a thick towel,

and upon this set the bottles. Cold water is now poured into the pail up to the neck of the bottles, which have previously been corked with cotton. Bring this water quickly to the boiling point and immediately remove the pail from the fire. Set in a cool place, and when cool put the bottles upon ice.

The Arnold sterilizer may be used for pasteurizing the milk by leaving off the hood and placing the lid ajar, and continuing the heating for forty-five minutes.

Milk which is to be given to a baby should not be put into an ice-chest containing other things, such as meat, vegetables, etc. A small nursery refrigerator or traveling refrigerator, as it is sometimes called, may be used; it is very convenient, especially when traveling with a bottle-fed baby.

It is useless to have pure milk if the bottle or the cup out of which the baby is to be fed is not clean. All articles which are used in the modification and feeding must be rendered aseptic before using. The funnel, graduate, mixing bottle and nursing bottle must be thoroughly washed and rinsed, and the bottles scrubbed out with soda and a brush if there be any scum on the glass;

then they should be boiled or heated dry.

A good bottle is the smooth round kind with the scale marked in one-half ounce and ounces. (Fig. 34.) As each bottle is emptied,

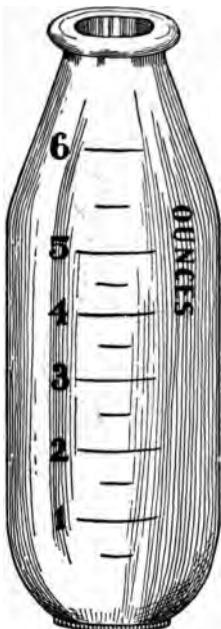


Figure 34.

it is rinsed with cold water, and then allowed to stand filled with water to which a little bicarbonate of soda has been added. Then follows the cleansing as mentioned above.

Common cotton is better than absorbent

cotton for stoppers. If the bottles are to be transported rubber corks are preferable.

The long tube with nipple attached must not be used; it has been proved unsatisfactory and dangerous. Only the black rubber nipple which slips over the neck of the bottle should be used. The hole in the nipple



Figure 35.

should not be large enough to permit the milk to run in a stream, but large enough for it to drop rapidly. (Fig. 35.)

The nipples, after using, should be thoroughly washed and kept in a solution of boric acid. This solution should be changed daily and the receptacle cleaned. Every other day the nipples should be boiled for five minutes.

To prepare the bottle for feeding, it is taken from the ice-chest and warmed by being placed in a receptacle filled with warm water, not over 110 degrees F. To test the temperature of the milk, a little can be



Figure 36.

poured upon the hand from the bottle. Never taste the milk from the nipple or bottle. It will only take a few minutes to warm it to the proper temperature of about 100 degrees.

There are many appliances for heating the bottles. Little individual bottle heaters

are sold in the shops which answer the purpose very satisfactorily. (Fig. 36.) There is also one heated by electricity which is probably the most convenient of any. Care must be taken not to heat the milk to too great a temperature. The bottle can be provided with a flannel holder or cover which aids in retaining the warmth.

The bottle should always be held by the nurse or mother until it is empty. The bad habit of leaving the baby with the nipple in its mouth, so that it can alternately suck and sleep, is to be avoided.

Feeding During the Second and Third Years.—The feeding of a child after the first year is so important that we will devote a few pages to the subject. Ordinarily the physician does not see the babies after the first few weeks or months, unless he is called on account of illness; this, however, is a mistake.

In the case of a baby fourteen months old, with only four teeth, the writer was called because the baby cried and was very restless. Questioning the mother, he found that the baby sat at table with its parents, and partook moderately of an indiscriminate

diet. This is only one example out of many. A young mother should understand that attention to the child's diet is just as necessary during the second and third years as during the first.

It is proper to give five meals a day throughout the second year, as they properly consist mostly of milk. The milk should be modified and prepared the first thing in the morning. Prepare sufficient to last the entire day, put it in separate bottles, and place them in the ice-chest.

The hours for feeding should be half-past six and ten a. m.; two, six and ten p. m. As stated in the paragraph upon sleep, some children will sleep from six p. m. to six a. m., but a bottle given at ten p. m. will often cause the baby to sleep later in the morning.

The preparation of food and manner of eating it are quite as important as the nature of the food. The child must be taught to eat slowly, and no large pieces of food should be taken into the mouth. Up to six or seven years of age all foods should be finely scraped or cut, and vegetables mashed to a pulp. Oatmeal and cereals generally must be cooked very soft. Give the food

at regular hours; do not allow the child to eat between meals. If it refuses to take food at the proper time, do not force it to eat. If, however, it refuses altogether a cause must be looked for; either there is something wrong with the food, the child's mouth is sore, or the child is sick.

From the twelfth to the fifteenth month the meals should be as follows:

First Meal.—At 6.30 a. m., a bottle containing seven ounces of milk taken from a bottle in which the milk and cream have been mixed, and three ounces of barley or oatmeal gruel. It is well to add to this a pinch of salt and one-half teaspoonful of granulated sugar.

Second Meal.—At 10 a. m. Same as first meal.

Third Meal.—At 2 p. m. Four to six ounces of broth, or one or two ounces of beef juice, or a soft boiled egg with zwieback. One of these articles may be given each day, alternating to suit the taste. With this is given milk as above.

Fourth Meal.—At 6 p. m. Same as first.

Fifth Meal.—Same as first.

During this period the baby may have strained orange juice, to be given an hour before the second feeding.

Diet from fifteenth to twentieth month:

First Meal.—Ten to twelve ounces of plain milk, warm.

Second Meal.—Oatmeal, thoroughly cooked with cream and salt; zwieback; milk.

Third Meal.—Broth; rice; beef juice or finely scraped rare steak or mutton chop; well cooked prunes or baked apple; stale bread or zwieback; milk.

Fourth Meal.—Bread and milk; farina and milk; granum and milk.

Fifth Meal.—Plain milk.

During this period the child should be weaned from the bottle except at the ten o'clock feeding. Orange juice is given in larger amounts than before.

Diet from the twentieth to the twenty-fourth month:

First Meal.—Plain milk.

Second Meal.—Cereals and cream; milk; zwieback or stale bread.

Third Meal.—Broth and crackers; scraped raw beef or beef juice, or soft boiled egg; zwieback or stale bread or toast lightly buttered; fruit juice, apple sauce, baked apple or prunes; water to drink.

Fourth Meal.—Bread and milk; farina and milk, or granum and milk; milk to drink.

Fifth Meal.—Milk.

Diet for third year:

Fruit upon arising, preferably orange juice or scraped apple.

First Meal.—Usually later than formerly, now 7 to 7.30. Cereal with cream and sugar; toast, zwieback or stale bread and butter; soft egg or coddled egg on toast.

Second Meal.—10 a. m. Milk and zwieback, or cup of broth and stale bread.

Third Meal.—1 p. m. Broth; steak, white meat of chicken, chop or roast beef scraped or cut finely; soft boiled rice, asparagus, spinach or pears well cooked and potatoes baked or mashed; stale bread and butter; custard or baked apple.

Fourth Meal.—Warm milk with bread or cornstarch or milk toast.

The above diet will admit of only slight modification. Certain articles to be avoided in the diet of a child under four years of age are as follows:

Meats—Sausage, ham, pork, salt fish, corned and dried beef, wild fowl, liver, hashes, stews and gravies.

Vegetables—Green corn, cucumbers, egg plant, onions, celery, tomatoes, radishes, cauliflower, potatoes other than baked or boiled or mashed.

Bread and Cake—Griddle cakes, new and hot breads and cakes.

Desserts—Candy (except a small piece of molasses candy once or twice a week), canned fruits and preserves, also pastry generally.

Fruits—All raw fruits out of season, bananas.

CHAPTER IX.

Diseases and Injuries.

The minor diseases of infancy are too frequently treated by the mother. The simplest illness may take on complications which will render it serious. A baby with a cough or sore throat may be developing one of the severest contagious diseases, while the mother may be treating it for some local ailment, or it may refuse its food and, while the mother thinks it is suffering from slight indigestion, it may have diphtheria. Some mothers avoid calling the physician for such so-called trivial diseases as measles, bronchitis, mumps or tonsillitis, in the meantime giving the child some little home treatment advised by a friend or by a family medical book. The chances for error by her in either diagnosis or treatment are so great that it is little short of criminal for the mother to undertake alone to treat a sick child. If anything serious should occur surely the mother would find it hard to

forgive herself for her neglect. It is much better, then, to call a physician for the simplest indispositions of infancy than for the mother to assume the responsibility of treatment.

It is in the prevention of disease that the mother most shows her skill and tact.

The question is often asked, Since the children sooner or later may have all or nearly all the diseases of childhood, why not let them be exposed as the occasion comes and be done with their attack of measles or scarlet fever or chicken pox? A little thought will show clearly that the mother who wilfully exposes her child to any contagious disease, does that child a positive wrong. In the first place, though some children have most of the diseases of infancy, many escape this or that disease. Indeed, a few children get through without having any of the contagious diseases. So it is not absolutely necessary for children to have these ailments. And, then, in the light of their preventability can anyone imagine she can afford to let her child take the chances of disability from complication and even of

death from these diseases! It hardly seems possible.

Preventive "Don'ts."—Don't take your baby to visit friends in a family where some member has or recently has had any of the so-called contagious diseases of childhood; and don't allow any person to enter your home who has in their own home any of these contagious diseases. The question is often asked how long after an attack of contagious disease is there danger of giving this disease. To such a query an answer will be found upon reference to the respective diseases in the following pages. Don't let a child with whooping cough come near your baby at any time, as often happens when a baby is out on the street in its carriage. Don't, if you can possibly avoid it, take your baby into a crowded street car or store or hall. Don't take the baby to the business part of the city; rather drive towards the parks where there is plenty of fresh air. Don't allow your friends or the nurse girl to kiss the baby, especially upon the mouth. Don't give the baby water drawn from the tap unless it has been boiled for one-half hour. Good spring water is better

than boiled or distilled waters. These don'ts, if religiously observed, will save many children from suffering.

Scarlet Fever.—This is one of the diseases most dreaded. The period of incubation, that is the time following exposure until the disease manifests itself, varies. In a large majority of the cases it is from two to four days; it may even be shorter than two days, or it may be several weeks. It is possible for the child to have the disease the second time, but such cases are very rare. The rash generally appears first about the neck and shoulders, then gradually on the chest and over the entire body. It is a smooth, scarlet rash not raised above the skin as the measles rash. This rash begins to fade from the fifth day of its appearance. It should be four weeks after the rash has disappeared, or even longer, if there be any peeling or ear discharge, before the childmingles with other children. A close exposure seems necessary to contract the disease. After the child has fully recovered the house should be thoroughly fumigated. In cities the case is reported to the health

department by the physician, and the house is fumigated by that department.

Measles.—Few children who have been exposed to measles escape. It is not necessary for the child to have a close exposure to contract this disease. Because of frequent complications the case should be managed scientifically, under the care of a physician. The period of incubation averages twelve days; however, it may be as many as twenty-one or as few as seven days. The attack is generally ushered in with a marked coryza, that is, a watery discharge from the nose and eyes; some fever; a feeling of general lassitude; and stomach disturbances. After from two to four days the eruption appears. This eruption appears first as small, dark-red spots seen on the neck or at the edge of the scalp. It soon is slightly raised and the number of spots increases, spreading to the trunk and limbs and perhaps coalescing. As soon as the case is known to be measles the patient should be isolated. A child should be kept away from another who has measles for at least two weeks after the rash has entirely disappeared.

Influenza.—A child should be kept away

from anyone suffering with influenza. Young infants are especially susceptible to the infection. Using a soiled handkerchief on the mouth or nose of the infant is a filthy and dangerous habit; the handkerchief always contains infective material to which the young infant is strongly susceptible. The treatment of influenza in infancy or childhood is in the prophylaxis, that is, in having the child avoid coming in contact with anyone suffering from the disease; and in using clean linen about the nose and mouth.

Malaria.—When the mother has malaria, the disease is frequently present in infants, especially in infants fed upon the breast. In such circumstances proper treatment of the mother usually cures the infant.

German Measles.—This disease is less contagious than ordinary measles. Infants under six months of age are rarely affected. It is one of the lightest diseases of infancy and rarely leaves any bad effect. The eruption frequently comes out without any premonitory symptoms and is quite variable in appearance. It resembles in different individuals mild cases of either measles or scar-

let fever and must be differentiated from both.

Ear Ache.—It is difficult in very young babies to determine whether the child is suffering from ear ache or not. Ear ache generally follows or accompanies a severe cold in the head, and is accompanied by a rise of temperature. If the baby cries at this time from pain and cannot be comforted by the usual means used to correct pain, a fairly good diagnosis of ear ache from inflammation of the middle ear may be made. Relief often comes to the infant by a discharge from the ear.

When it seems probable that the child is suffering from ear ache, a physician should be consulted. In the meantime, almost instant relief from pain can be given by using either salt bags or hot water bags applied to the side of the head. Nothing should be put into the ear unless by the physician's order, and if there be a discharge from the ear do not plug it with cotton. The ear should not be irrigated with any solution without medical advice. Dropping sweet oil, laudanum or paregoric into the ear is dangerous. One attack of ear ache is

frequently the precursor of others, either during the same season or the next winter. It is often due to the fact that the child is run down in health.

Mumps.—Close contact is required to communicate mumps, which is an inflammation of the salivary gland in the back part of the cheek. Infants are rarely affected. The period of incubation is from two to three weeks after contact. It is contagious from the beginning of the symptoms, and can be given to other persons for several days after the symptoms have disappeared. Pain between the ear and the lower jaw, accompanied by a slight rise in temperature, usually precedes the swelling. Both sides of the face are generally affected, but the trouble may occur only on one side. The side of the face should be protected by a layer of cotton tied in place. Complications are very rare in children and infants. The child should be confined to the house if the symptoms are mild, and to the bed if they are severe. Frequently the pain is so bad that the child cannot eat. Under such circumstances, it may be necessary for the physician to give an opiate to stop the pain.

Chicken Pox.—This is one of the mildest of the contagious diseases of infancy or childhood. Rarely are there any complications. Infants under six months of age seldom have the disease. It occurs but once in a life time. The incubation period is from thirteen to seventeen days, and the duration of the disease is from eight to ten days. At the beginning of the eruptive stage there is generally a rise in temperature with feeling of lassitude. The eruption begins first on the face or shoulders, and consists of a small, red, elevated area which may turn into a blister with an areola. Ordinarily a child need not be kept in bed. The danger of contagion is over after three weeks from the beginning of the eruption. Children should be kept from school for that time.

Whooping-Cough.—Fully one-half of the cases of whooping-cough occur during the first two years of life, this being a time when the life force is very feeble, and when the digestive apparatus is more or less interfered with by changing of food, cutting of teeth, etc. The disease by lasting so long necessarily affects the infant unfavorably.

It is much easier to treat in an older child. The incubation period of whooping-cough is seven to fourteen days. The disease usually comes on slowly, beginning with a cough, which lasts a few days, and which, after ten days or so, is accompanied by paroxysms. These paroxysms are associated with the typical whoop, which a mother can easily detect. The spasmodic stage usually lasts about one month. During this time the child will often vomit its food and frequently will become quite weak. Fresh air seems to be a great tonic, and country air is always desirable. If the child lives in the city, the room and bedding should be frequently changed and aired. Tonics are often unnecessary. There should be no contact with other children while the paroxysms of coughing last.

Diphtheria.—Any inflammation in the throat should be looked upon with suspicion and whenever the baby is sick the throat should be examined. Grayish patches upon the tonsils may indicate diphtheria, and should be examined immediately by the physician. A few hours' delay may take

the child beyond help, even though antitoxin is then given.

Since the introduction of antitoxin in the treatment of diphtheria, the mortality from this disease has been reduced tremendously. No treatment in modern times has proven of so much value; this fact should be known to all mothers, and there should be no hesitancy in prompt recourse to this treatment. The earlier in the disease the antitoxin is given, the more favorable is the result. As a preventive, the antitoxin should be given to each child who has been exposed.

The danger of contagion is not over until several days after the membrane has entirely disappeared. The disease generally requires a close contact. Owing to the complications which may follow, the child should be under the care of a physician for a long time. Older children should be kept in bed for from one to three weeks following the disappearance of the membrane, the time depending upon the severity of the case.

Vaccination.—The effectiveness of vaccination in the prevention of smallpox can-

not be doubted. Carefully compiled statistics have long since proven the fact of immunity conferred in this manner.

A healthy baby should be vaccinated some time between the eighth and sixteenth weeks following birth. It should be done before teething has commenced. Ordinarily mothers look too lightly upon such an operation, and the "scratch" is given no attention. As soon as the vaccination begins to take, the wound must be kept clean and protected. Wash the sore spot with absorbent cotton saturated in alcohol and water of equal parts, and keep it protected with a clean piece of soft linen. There will be some fever and restlessness which will subside in twenty-four to forty-eight hours.

Convulsions.—Children with perfect digestion and proper food rarely have convulsions. If a child does have a spasm, put the feet into a mustard bath, wrap the body up in towels which have been soaked in mustard water (two heaping teaspoonfuls to one quart of warm water), and send for the physician.

Should the spasm continue and the child seem weak, with nails and lips blue and

hands cold, put him immediately into a hot bath. The temperature must not be over 106 degrees, and it must always be tested by a bath thermometer, which every mother should have, otherwise there is great danger of burning the infant.

Croup.—This is not ordinarily a dangerous condition, but as it usually comes on suddenly at night with much disturbance and distress of the patient it causes the parents much alarm. In a mild attack there is a noisy breathing, followed by a tight barking or croupy cough. When severe the breathing is more noisy and difficult. This form of croup must not be mistaken for membranous croup, which is a diphtheria of the larynx. While croup is generally considered harmless, it frequently is the forerunner of a more serious difficulty and a physician should be consulted. Home remedies, as the collection of steam from a kettle near the bed and giving the baby a few drops of syrup of ipecac, will suffice until the physician arrives. Croupy children must be kept dry and the feet warm.

Foreign Objects Swallowed, Etc.—Very young infants are not likely to get foreign

substances such as buttons, marbles, etc., into their mouths, but when the baby begins to walk, the mouth seems to be made for all these little articles. If some foreign body has disappeared in the child's mouth, examine the throat, because sometimes it may be lodged where it can be removed with the finger. If the infant be choking, hold it by the feet and a few taps upon the back will expel the foreign body. If, however, the object has passed into the stomach, the treatment must depend upon the age of the baby. In children who eat starchy foods, a considerable quantity of bread and potatoes should immediately be given with very little if any fluids. By this means a coating is formed around the article which passes on through the intestinal canal. Do not give an emetic or a cathartic. If the foreign body be a dangerous or a very large one, the physician should be notified.

There must be no attempt to remove foreign objects in the nose or ear by the use of any instrument in the hands of the nurse or mother. There is danger of injuring the child, and also danger of pushing the body farther into the ear. If it cannot be removed

with the fingers, the child should be at once taken to a physician.

Tonsils and Adenoids.—Enlargement of the tonsils may be either hereditary or congenital. At the age of two years the symptoms are apt to become very marked, the most prominent being mouth-breathing, disturbed sleep and deafness. Associated with the large tonsils somewhat similar growths in the upper throat just back of the nose, known as adenoids, are frequently found. These conditions together are a serious drawback to the development of the child; fortunately, however, they are very rare in extreme infancy. When there is evidence enough to show that these growths are interfering with the baby's health, or that the baby is becoming a mouth-breather, active treatment must be instigated. The tonsils and adenoids must be removed. The mother does her child a wrong if she refuses to comply with the advice of the physician concerning this operation. The immediate benefit which children receive from the removal of tonsils and adenoids in aggravated cases is wonderful; often from being weak

puny children they quickly develop robust strength.

Mouth breathers, from whatever cause, are poor sleepers and their restlessness in bed, if not due to adenoids or to some defect of the nose, may often be corrected by fastening a bandage around the head and under the chin. This forces the mouth shut and compels the child to breathe through the nostrils. Wearing the bandage for even a few nights will often serve to break up the habit.

Much may be done to prevent adenoids and the enlargement of the tonsils by a careful attention to the hygiene of the mouth and nose of the infant. The mouth should be kept clean, as before mentioned. If the nostril of a young child should become closed or inflamed by a slight cold in the head, vaseline or liquid albolene rubbed on the bridge of the nose or the application to the nostril of either of these substances will frequently result in reducing the inflammation.

Irrigation of the nostril by means of a syringe should never be done, except by the direction of a physician. The danger of forcing infective material through the

Eustachian tube into the middle ear by the syringe is great.

Burns.—Only the slightest burns should be treated by the mother. Relieve pain by applying several thicknesses of gauze saturated with a solution of baking soda—a heaping teaspoonful to a glass of water. The wound may then be dressed with sterilized vaseline and covered. If the skin is broken call the physician.

Sunburn.—When painful sunburn demands treatment, cover the burn with oxide of zinc ointment.

Mosquito Bites.—Ammonia, spirits of camphor or dampened salt rubbed on the swelling will give relief from mosquito bite.

Bruises.—To prevent swelling and discoloration from bruises, immediately put on compresses wet with ice water or very hot water, or equal parts of alcohol and water. Continue this treatment for some time. If the discoloration has occurred massage with lanolin.

Cuts and Wounds.—Apply an antiseptic dressing made of surgically clean gauze saturated with a boric acid solution, compressing the wound tightly if there is much

bleeding, and let it remain until the physician arrives.

Frequently a needle is used to open a pimple or boil. Whenever the occasion occurs to do so the skin must be cleansed by soap and water and then alcohol. The needle should then be boiled for twenty minutes or heated to a red heat in a flame. Many cases of infection occur by a neglect of this.

In every household there should be a medicine chest containing the following:

Glass graduate marked with fluid drachms and fluid ounces.

Medicine dropper.

Absorbent cotton.

Borated gauze.

Gauze bandages—assorted sizes.

Oil silk.

Boric acid (same as boracic acid) crystals and powder.

Pocket case of instruments containing scissors, knife, dressing forceps, sutures and needles.

Calomel, one-tenth and one-fourth grain tablets.

Camphorated oil.

Castor oil.

Sweet spirits of nitre.
Aromatic spirits of ammonia.
Syrup of ipecacuanha.
Alcohol.
Whisky.
Olive oil.
Glycerin.
Tincture of iodine.
Mustard.
Soda mint tablets.
Epsom salts.
Vaseline.
Zinc ointment.

Appendix.

Gum-Arabic Water.—Dissolve in one pint of boiling water, one ounce of gum arabic. Add a wine glass full of sherry, two table spoonfuls of sugar and juice of one lemon. Cool and add ice.

Junket.—Make lukewarm one pint of fresh milk, to this add one teaspoonful of essence of pepsin or one-half of a junket or rennet tablet. Mix, flavor with sugar, nutmeg and brandy; then pour into cups and stand in cool place until curdled.

Flaxseed Tea.—One ounce of whole flax-seed, juice of two lemons, two small sticks of licorice root crushed, one heaping tablespoonful of sugar. Pour on these two pints of boiling water and let stand in a hot place for three or four hours. Strain.

Chicken Broth.—Chop fine a small chicken and boil in a quart of water for one hour, adding a blade of mace and parsley, some rice and a crust of bread. Skim from time to time and strain.

Albumen Water or Egg Water for Young Infants.—Stir the white of one egg into one pint of ice cold water, do not shake. Flavor to taste.

Whey.—To a pint of milk (usually lower part of bottle) warmed to body heat, add half of a junket tablet or half a grain of rennet (obtained at the drug store), previously dissolved in a tablespoon of cold water. In thirty minutes the curd will be formed. The whey is separated from the curd by being strained through a napkin. Immediately put on ice. Whey is a valuable food in cases of indigestion.

Dried Bread.—Use either stale or fresh bread; cut into thin slices and place in the oven with door open. Dry until it is crisp, but not browned. It is preferable to crackers for children.

Coddled Egg.—A fresh egg, shell on, is placed in boiling water, which is immediately removed from the fire. Let the egg remain in the water, which is gradually cooling for eight minutes, when the white should be about the consistency of jelly. For a delicate digestion only the white, which

can easily be separated from the yolk, should be given.

Barley Water.—Take two teaspoonfuls of pearl barley and after a thorough washing soak in cold water for three hours. Pour off the water and add to the barley a quart of fresh water. Boil for two hours, adding water to keep up the original amount. Strain through fine cheese cloth, season, keep cool.

Robinson's prepared barley may be used by taking one pint of water and slowly stirring into it a tablespoonful of the barley which has previously been made into a paste by mixing with water. Boil for fifteen minutes and strain.

Oatmeal Water.—Prepared as barley water. Is used instead of barley water when the baby is constipated. With diarrhea rice or barley is better.

Limewater.—One heaping teaspoonful of slaked lime; one quart boiled or distilled water; place in a corked bottle and shake two or three times during the first hours. The lime should then be allowed to settle. After twenty-four hours pour off the upper clear fluid, and throw away; then add water,

shake and let stand; decant after twenty-four hours.

Beef Juice, No. 1.—One pound of rare round steak, cut thick, slightly broiled, and the juice pressed out by a lemon squeezer, or better still, a meat press. A meat press can be had for a reasonable price and is a most serviceable article. Season the juice with salt and give cold, or heat by placing the cup which holds it in warm water. If heated too much it coagulates the albumen, which will appear as flakes or shreds floating in the fluid.

Beef Juice, No. 2.—One pound of finely chopped round steak, six ounces of cold water, a pinch of salt. Place in a covered jar and stand on ice or in a cold place five or six hours, shake occasionally. Strain and squeeze juice from meat and season. This is more nutritious than No. 1 and furnishes twice the amount of juice.

Beef Juice, No. 3.—Select round steak free from fat and chop into pieces less than an inch square and put in a double boiler. In the lower part place cold water; put no water with the meat. Place this on a slow fire where the water will simmer and not

boil, for three hours. Press out the juice and season.

Beef Juice, No. 4.—One-half pound of chopped lean beef is made in an oval flat mass, placed on the broiler and browned. The juice is then pressed out with a small meat press, mixed with an equal part of barley water and salted.

Mutton Broth.—Take one pound of finely chopped lean mutton, including some of the bone, one pint of cold water and a pinch of salt. Cook for three hours on a slow fire. Reduce to half a pint, adding water if necessary. Strain through muslin and when cold carefully remove the fat. Feed warm or cold. A very nutritious broth is made by thickening this with corn starch or arrow-root, cooking for ten minutes and then adding three ounces of milk to a half pint of broth.

Egg Lemonade.—Beat up an egg and one tablespoonful of sugar. Stir in three tablespoonfuls of cold water and the juice of one lemon; fill glass with chopped ice. Shake well and pour out into clean glass. Drink it through a straw.

Milk and Egg.—Season milk with salt;

beat white of egg until stiff; add egg to milk and stir. Flavor with grated nutmeg or cinnamon.

Milk Shake.—White of one egg, one teaspoonful of sugar, two tablespoonfuls of chopped ice, one ounce of cream. Shake two minutes in milk shaker. Add cold milk to fill glass, flavor with vanilla or lemon and shake again.

Toast Water.—Put two or three pieces of well-toasted bread in one quart of boiling water; allow to stand until cool and then strain.

Salt, or Saline Solution.—Dissolve one teaspoonful of pure table salt in each pint of water.

Boric-Acid Solution (Boric is the same as boracic).—Two tablespoonfuls of boric-acid crystals to a pint of water which has been boiled or distilled; let stand for several hours. After standing, filter through a clean absorbent cotton and keep the bottle well corked. A fresh solution should be made frequently.

Mustard Bath.—Add two tablespoonfuls of mustard to one gallon of water. For very small infants it is better to put the mustard

in a piece of thin muslin and let it remain in the bath, gently squeezing it from time to time.

Starch Bath.—Take one-half a cupful of boiled starch to four gallons of water. The soda and starch baths are useful for hives and like irritations.

Soda Bath.—To every four gallons of water put one tablespoonful of washing soda.

Salt Bath.—Dissolve four heaping tablespoonfuls of common or sea salt in every gallon of water. A plunge in such a bath, followed by a brisk rubbing, has a decidedly tonic effect.

Bran Bath.—Put a pound or more of bran in a muslin bag and boil in water for fifteen minutes. Squeeze occasionally and add this water to a bath until it is milky.

Warm Compress.—Made by folding a piece of cloth into several thicknesses, dipping it in tepid water and placing it on the affected part. Cover with oil silk a little larger than the cloth. Hold the compress in place by a bandage. For sore throat and inflammation.

Cold Compress.—Same amount of cloth

dipped in cold water, changed from time to time and not allowed to become warm. Not to be covered with oil silk. For sprains and inflammation.

Hot Compress.—Take flannel folded into several layers and place in a towel. Dip into boiling water and wring out by twisting the towel.

Mustard Pack.—Strip the child of all clothing and wrap him in a towel or sheet saturated with the following mixture: one tablespoonful of mustard to one quart of tepid water. Then completely cover the child with a blanket. This pack may be continued for fifteen minutes.

Hot Fomentation.—Wring out a piece of flannel from water as hot as the hand can bear. Place it over the affected part and on top place a layer of cotton batting and oiled silk. This is much cleaner than poultices.

Turpentine Stupe.—Wring out a piece of flannel in hot water and sprinkle with turpentine, about one half-teaspoonful to each square foot of flannel. Apply and cover with oil silk and a dry towel. Leave on as long as possible, depending upon the

amount of irritation. The flannel can be kept warm by the aid of hot water bags or bottles.

Mustard Plaster.—One part of mustard is mixed with three or four parts of flour. Boiling water is added to make pasty consistency, at the same time constantly stirring. Spread on a cloth and apply directly to the skin. If it irritates, a thin piece of cloth can be put between. A plaster less liable to burn or blister is prepared by taking one tablespoonful of mustard, three or four of flour, the white of an egg and one teaspoonful of glycerine.

Cotton Jacket.—Make double layer muslin waist reaching high in front and behind to pin over the shoulders. Between these layers place a layer of cotton batting about one inch thick. External to the outer layer a piece of oiled silk of the same size as the waist is placed and the whole is quilted or tacked. The lower border of the jacket should not cover the upper abdomen.

Poultices.—A poultice retains heat longer than a fomentation. It should be about one-half inch in thickness.

Flaxseed Poultice.—Add flaxseed to hot

or boiling water and stir continuously until it is the consistency of thick mush, so that it will spread and not flow. Spread this between layers of cheese cloth, cover with oil silk. A hot water bag will continue the heat. Renew when cool.

Emetics.—(1).—A teaspoonful of syrup of ipecac (ipecacuanha), repeated in fifteen minutes if necessary.

(2).—A glass of warm water with as much common salt as it will dissolve.

(3).—A teaspoonful of mustard in a large quantity of warm water:

Emetics are used to empty the stomach in cases of poisoning or acute indigestion.

Castor Oil.—Castor oil can be given to babies without disguising the taste, but for older children and adults it often must be mixed with something that will render the taste more pleasant.

1. Wet the inside of a glass with sherry, leaving in the glass about a teaspoonful of the liquid. Pour the oil into the glass and then cover with a thin layer of whisky. Drink at one swallow.

2. Squeeze into a glass the juice of half an orange. Pour into this the oil and then add the juice of the other half of the orange.

I N D E X.

Page	Page		
Adenoids	171	Baby, outfit of.....	94
Antitoxine	167	pulse of.....	73
After pains.....	65	respiration of.....	73
Albumen water.....	178	rest and sleep.....	102
Arnold's sterilizer.....	145	smell	71
Baby, bathing of...104, 106		speech	81
bed	100	sucking thumb.....	126
bowels, care of.....	108	taste,	73
breasts, care of.....	82	tears	71
carriage	126	teeth, care of.....	80
chafing of.....	122	teeth, cutting of.....	79
chest, circumference of	78	temperature of.....	72
circumcision of.....	117	toys of.....	125
clothing of.....	83	vision of.....	71
clothes, long.....	91	walking, when.....	81
colic, treatment of...112		water for.....	130
constipation of.....	110	weaning of.....	137
crying of.....	118	weight of.....	76
convulsions of.....	168	Bathing	34
development of.....	71	Bag of waters.....	54
exercise of.....	118	Barley water.....	179
eyes, care of.....	105	Beef juice No. 1.....	180
food	129	Beef juice No. 2.....	180
food, artificial.....	139	Beef juice No. 3.....	180
going out.....	121	Beef juice No. 4.....	181
hair	74	Bladder, irritation of....	36
head, shape of.....	74	Bow legs.....	127
head, soft spot of....	75	Breast builder.....	47, 48
hearing of.....	72	Breasts, care of.....	37
height of.....	78	Bruises	173
kidneys of.....	116	Burns	173
legs of.....	103	Castor oil.....	186
mouth, care of.....	105	Chicken pox.....	165
napkins, care of.....	115	Circumcision	117
nerves of.....	118	Coddled egg.....	178
nose, care of.....	106	Cold compresses.....	183
nursing of, how to		Confinement—	
hold	131	company after.....	57
nursing, length of.	133-136	convalescence after...	57

INDEX.

Page	Page
Confinement—	
diet after.....	60
date of.....	18
getting up after.....	59
preparations for.....	45
rest and exercise after	58
Convulsions	168
Corset	25
Cotton jacket.....	185
Cow's milk.....	141
Croup	169
Cuts and wounds.....	173
Date of confinement....	18
Diet after confinement..	60
Diphtheria	166
Diseases and injuries....	157
Douche	37
Dried bread.....	178
Ear ache.....	163
Edema in pregnancy....	41
Egg lemonade.....	181
Emetics	186
Equipoise waist.....	27
Exercise after confinement	58
Exercise in pregnancy....	33
Fetal movements.....	15
Ferris waist.....	27
Flaxseed tea.....	177
Flaxseed poultice.....	185
Food, artificial.....	139
Food during second year.	150
Foreign objects swallowed	169
Fresh air in pregnancy..	34
German measles	162
Glycerine suppository....	30
Gum arabic water.....	177
Heat rash.....	107
Heart-burn	33
Hemorrhoids	36
Heredity	42
Hot compress.....	184
Hot fomentation.....	184
Influenza	161
Junket	177
Kidneys in pregnancy...	35
Kissing baby.....	127
Labor pains.....	54
Lay nurse, suggestions to	51
Lime water.....	171
Lying-in room	53
Malaria	162
Measles	161
Medicine chest.....	174
Mental impressions.....	42
Menstruation, cessation of	15, 16
Menstruation, nursing during	134
Milk and egg.....	181
Milk, pasteurized.....	145
Milk-Shake	182
Milk sterilized.....	144
Morning sickness.....	15, 32
Mosquito bites.....	173
Mouth breathing.....	172
Mumps	164
Mustard bath.....	182
Mustard compress	42
Mustard pack	184
Mustard plaster	185
Mutton broth	181
Nipple, rubber.....	148
Nipple, shield	132
Nipple, sore	132
Nurse	51
Nurse, lay.....	51
Nurse, wet.....	139
Nursery	120
Nursery maid.....	122
Nursing bottle	147
Oatmeal water.....	179
Patient's mother.....	53
Physician's list.....	49

INDEX.

189

Page	Page		
Physician	127	Pregnancy—	
Play things.....	127	swelling of body dur-	
Poultices	185	ing	29
Pregnancy—		teeth, care of.....	40
abdominal supporter		urine, examination of.	35
during	29	vaginal douche during	37
artificial interruption		vomiting in.....	15
of	16	Pregnant woman, examin-	
bathing in.....	34	ation of.....	17
bladder, irritation of.	36	Preventive "don'ts".....	159
bowels, care of.....	30	Puberty, care during	12
breasts, care of.....	37	Salt or saline solution..	159
dress reform waists..	27	Salt bath.....	182
clothing	24	Scales	76
constipation	33	Scarlet fever.....	76
corset	25	Show	54
diagnosis of.....	15	Soda bath.....	183
exercise during.....	33	Soap	108
fetus, movements dur-		Starch bath.....	183
ing	15, 17	Sunburn	173
fresh air during.....	34	Swellings in pregnancy..	41
heartburn during.....	32	Teeth, care of	40
hemorrhoids in.....	36	Thermometer, clinical....	72
hygiene of.....	21	Toast water.....	182
interruption of artifi-		Tonsils and adenoids....	171
cially	16	Toys	125
kidneys during.....	35	Urine in pregnancy.....	35
length of.....	19	Vaccination	167
maternity corset for..	27	Vaginal douche.....	37
mental impressions in.	42	Vomiting in pregnancy..	15
morning sickness dur-			
ing	32		
practical facts about.	15		
prevention of.....	14		
shoes worn during....	29		

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